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; sequence 2, Application US/09121425
; Patent No. 6153418
; GENERAL INFORMATION:
; APPLICANT: Lehmann, Martin
; TITLE OF INVENTION: Consensus Phytases
; FILE REFERENCE: consensus phytases 13239
; CURRENT APPLICATION NUMBER: US/09/121,425
; EARLIER FILING DATE: 1998-07-23
; EARLIER APPLICATION NUMBER: EPO 97112688.3
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 467
; TYPE: prt
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seq_name: /cgn2_6/ptodata/2/1aa/6B_COMB.dep:US-08-868-435-33
seq_documentation_block:
; Sequence 33, Application US/08868435
; Patent No. 6291221
; GENERAL INFORMATION:
; APPLICANT: Van Loon, Adolphus
; APPLICANT: Mitchell, David
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY
; NUMBER OF SEQUENCES: 35
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: United States of America
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/868,435
; FILING DATE:
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/744,231
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Kass, Alan P
; REGISTRATION NUMBER: 32142
; REFERENCE/DOCKET NUMBER: Case Docket 9339
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4205
; TELEFAX: (201) 235-2363
; INFORMATION FOR SEQ ID NO: 33:
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1 STREET: 340 Kingsland Street
2 City: Nutley
3 STATE: New Jersey
4 COUNTRY: United States of America
5 ZIP: 07110
6
7 COMPUTER READABLE FORM:
8 MEDIUM TYPE: Floppy disk
9 COMPUTER: IBM PC compatible
10 OPERATING SYSTEM: PC-DOS/MS-DOS
11 SOFTWARE: Patentin Release #1.0, Version #1.25
12 CURRENT APPLICATION DATA:
13 APPLICATION NUMBER: US/08/744,231
14 FILING DATE:
15 CLASSIFICATION: 435
16 PRIOR APPLICATION DATA:
17 APPLICATION NUMBER: 08/424,757
18 FILING DATE: 18-APR-1995
19 ATTORNEY/AGENT INFORMATION:
20 NAME: Kass, Alan P
21 REGISTRATION NUMBER: 32142
22 REFERENCE/DOCKET NUMBER: Case Docket 9339
23 TELECOMMUNICATION INFORMATION:
24 TELEFAX: (201) 235-2363
25 INFORMATION FOR SEQ ID NO: 33:
26 SEQUENCE CHARACTERISTICS:
27 LENGTH: 465 amino acids
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1 FILING DATE: 19-MAR-1990
2 PRIOR APPLICATION DATA:
3 APPLICATION NUMBER: US 07/044,077
4 FILING DATE: 29-APR-1987
5 PRIOR APPLICATION DATA:
6 APPLICATION NUMBER: UK 8610600
7 FILING DATE: 30-APR-1986
8 ATTORNEY/AGENT INFORMATION:
9 NAME: Cimbela, Michele A.
10 REGISTRATION NUMBER: 33,851
11 REFERENCE/DOCKET NUMBER: 1050,0240004
12 TELECOMMUNICATION INFORMATION:
13 TELEPHONE: (202) 371-2600
14 TELEFAX: (202) 371-2540
15 INFORMATION FOR SEQ ID NO: 8:
16 SEQUENCE CHARACTERISTICS:
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19 TOPOLOGY: linear
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; Patent No. 5830733
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; APPLICANT: Nevalainen, Helena K.M.
; APPLICANT: Palohelmo, Marja T.
; APPLICANT: Miettinen-Oinonen, Arja S.K.
; APPLICANT: Forckeli, Tuula K.
; APPLICANT: Cantrell, Michael
; APPLICANT: Piddington, Christopher S.
; APPLICANT: Rambossek, John A.
; APPLICANT: Turunen, Marja K.
; APPLICANT: Fagerstr m, Richard B.
; APPLICANT: Houston, Christine S.
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes
; TIME OF INVENTION: in Trichoderma
; NUMBER OF SEQUENCES: 69
CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
; STREET: 1100 New York Avenue, Suite 600
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/609,426A
; FILING DATE: 01-MAR-1996
CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/923,724
; FILING DATE: 31-JUL-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/496,155
; FILING DATE: 19-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/044,077
; FILING DATE: 29-APR-1987
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 8610600
; FILING DATE: 30-APR-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Reed, Grant E.
; REGISTRATION NUMBER: P-41,264
; REFERENCE/DOCKET NUMBER: 1050.0080001
TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 371-2600
; TELEFAX: (202) 371-2540
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-609-426A-8

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Quality: 1866.00      Length: 467
Ratio: 4.453          Gaps: 0
Percent Similarity: 89.722      Percent Identity: 74.518

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112	TTCACGGTGGTTACCAATGTTCCCAAAATTCCTACCTTGGGGGTCAA	161
34	AlaAspIleuTyrGlnCysPheSerGlnIuThrSerHisLeuTrpAlaGln	50
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212	TCCAAAGGTGTGAAGTACTTCTTCGTTCAAGTTTGGTCACAGCGG	261
84	IleArgTyrProThrGlnSerGlyGlyLysTyrSerAlaLeuIleGln	100
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seq_documentation_block:
: Sequence 2, Application US/08374652C
: Patent No. 5834286
: GENERAL INFORMATION:
: APPLICANT: NEVALAINEN, HELENA K.M.
: APPLICANT: PALOHEIMO, MARJA T.
: APPLICANT: FAGERSTROM, RICHARD B.
: APPLICANT: MIETTINEN-OINONEN, ARJA S.
: APPLICANT: TURUNEN, MARJA K.
: APPLICANT: RAMBOSER, JOHN A.
: APPLICANT: PIDDINGTON, CHRISTOPHER S.
: APPLICANT: HOUSTON, CHRISTINE S.
: APPLICANT: CANTRELL, MICHAEL A.
: TITLE OF INVENTION: RECOMBINANT CELLS, DNA CONSTRUCTS,
: TITLE OF INVENTION: VECTORS AND METHODS FOR EXPRESSING,
: TITLE OF INVENTION: ENZYMES IN DESIRED RATIOS
: NUMBER OF SEQUENCES: 94
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
: STREET: 1100 NEW YORK AVENUE, SUITE 600
: CITY: WASHINGTON
: STATE: DC
: COUNTRY: USA
: ZIP: 20005
: COMPUTER READABLE FORM:

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1 MEDIUM TYPE: Floppy disk
2 COMPUTER: IBM PC compatible
3 OPERATING SYSTEM: PC-DOS/MS-DOS
4 SOFTWARE: Patentin Release #1.0, Ver
5 CURRENT APPLICATION DATA:
6 APPLICATION NUMBER: US/08/374,652C
7 FILING DATE: 24-MAY-1995
8 CLASSIFICATION: 435
9 PRIOR APPLICATION DATA:
10 APPLICATION NUMBER: PCT/US93/07058
11 FILING DATE: 27-JUL-1993
12 CLASSIFICATION: 435
13 PRIOR APPLICATION DATA:
14 APPLICATION NUMBER: US 07/925,401
15 FILING DATE: 31-JUL-1992
16 CLASSIFICATION: 435
17 ATTORNEY/AGENT INFORMATION:
18 NAME: REED, GRANT E.
19 REGISTRATION NUMBER: 41,264
20 REFERENCE/DOCKET NUMBER: 1050.071000
21 TELECOMMUNICATION INFORMATION:
22 TELEPHONE: 202-371-2600
23 TELEFAX: 202-371-2540
24 INFORMATION FOR SEQ ID NO: 2:
25 SEQUENCE CHARACTERISTICS:
26 LENGTH: 467 amino acids
27 TYPE: amino acid
28 STRANDEDNESS: single
29 TOPOLOGY: not relevant
30 MOLECULE TYPE: protein
31 US-08-374-652C-2

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alignment_scores:
    Quality: 1866.00
    Ratio: 4.453
    Percent Similarity: 89.722
    Length: 467
    Gaps: 0
    Percent Identity: 74.518

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alignment\_block:

US-09-488-265-25 X US-08-374-652C-2

Align seg 1/1 to: US-08-374-652C-2 from: 1 to: 467

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22  ||||| :||| :||| :||| :||| :||| :||| :||| :||| :|||
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167	eAlaSerGlycIuYrSheliGeliGlyPhaGlnSerThrLysLeuYsA	184
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seq_documentation_block:
; Sequence 20, Application US/08146424
; Patent No. 5593963
; GENERAL INFORMATION:
; APPLICANT: VAN OIJEN, ALBERT J. J.
; APPLICANT: RIETVELD, KRISTIN
; APPLICANT: HOEKEMA, ANDREAS
; APPLICANT: PEN, JAN
; APPLICANT: SIMONS, PETER C.
; APPLICANT: VERMOERD, TEUNIS C.
; TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: MORRISON & FOERSTER
; STREET: 755 Page Mill Road
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94304-1018
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/146.424
; FILING DATE: 02-NOV-1993
; CLASSIFICATION: 435

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ATTORNEY/AGENT INFORMATION:
; NAME: KENNEDY, BILL
; REGISTRATION NUMBER: 33,407
; REFERENCE/DOCKET NUMBER: 44615-20011.24
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 813-5600
; TELEFAX: (415) 494-0792
; TELE: 706141
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-146-424-20

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Quality: 1862.00 Length: 467
Ratio: 4.433 Gaps: 0
Percent Similarity: 89.936 Percent Identity: 74.518

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: Sequence 2. Application US/08693709
: Patent No. 5770413
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: GENERAL INFORMATION:
: APPLICANT: VAN OOIJEN, ALBERT J.J.
: APPLICANT: RIETVELD, KRIJN
: APPLICANT: HOEKEMA, ANDREAS
: APPLICANT: PEN, JAN
: APPLICANT: SIMONS, PETER C.
: APPLICANT: VERHOED, TEUNIS C.
: TITLE OF INVENTION: THE EXPRESSION OF PHYTASE
: NUMBER OF SEQUENCES: 28
: CORRESPONDENCE ADDRESS:
: ADDRESS: MORRISON & FOERSTER
: STREET: 755 PAGE MILL ROAD
: CITY: Palo Alto
: STATE: CA
: COUNTRY: USA
: ZIP: 94304-1018
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Diskette
: COMPUTER: IBM Compatible
: OPERATING SYSTEM: DOS
: SOFTWARE: FastSeq for Windows Version 2.0
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/693,709
: FILING DATE: 07-AUG-1996
: CLASSIFICATION: 800
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: 08/146,424
: FILING DATE: 02-NOV-1993
: ATTORNEY/AGENT INFORMATION:
: NAME: Muraishige, Kate H
: REGISTRATION NUMBER: 29,959
: REFERENCE/DOCKET NUMBER: 24615-20011.10
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 415-813-5600
: TELEFAX: 415-494-0792
:
: INFORMATION FOR SEQ ID NO: 2:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 467 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: MOLECULE TYPE: protein
: FRAGMENT TYPE: internal
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: 12 ATGGCGGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 61
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: 1 MetGlyValSerAlaValIleuLeuProLeuTyrrleuLeuSerGlyValTh 17
:
: 62 ATCCGTAACCGCTTGGCTCTCGTGGTAAATTCACCTTTGTGACACTG 111
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
: 17 rSerGlyLeuAlaValProAlaSerArgAsnGlnInserSerCysAspThrV 34
:
: 112 TTGACGGTGTACCATGTTCCACAGAAATTTCTCACTGTGGGCTCA 161

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162 TACGTCACATCTCTCTGGTACGACAAATGCTATTTGTCGAGAGT 211
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51 TyrAlaProPhePheSerLeuAlaSnGlnSerValIleSerProGln 67
212 TCCAAAGGTTGTAGATTACTTTGTTCAAGTTTGTCTAGACAGGTTG 261
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67 LProAlaGlyCysArgValThrPheAlaGlnValLeuSerArgHisGly 84
262 CTAGATACCACTCTCTCTAGTAGAAGTACTGCTGTTGATTGTTAA 311
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84 IaArgTyrProThrAspSerLysLysLysTyrSerAlaLeuIleGln 100
312 GCTATTCAAAAGACGCTACTGCTTTCAGAGGTAAGTACGCTTTCTGAA 361
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362 GACTTACACATCACTTTGGGTCGACGACTGACTGCTCAATGCGTGAAC 411
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462 GCTAGAAAGATTGTTCCATTCGTTAGAGCTTCTGTTCTGACAGAGTTAT 511
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151 ThrArgAsnIleValProPheIleArgSerSerGlySerSerArgValIle 167
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862 TGTTCACCTACGAGCAATGATTCATATACGACTACTTGAATCTTTGGGT 911
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962 TGGTTTGTTAAAGAAATGATTGCTAGATGACTCACTGCTCCAGTTCAG 1011
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317 LgTyrTyrAlaAsnGluLeuLeuIleAlaArgLeuThrHisSerProValHis 334
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1112 TATTTCCTGCTTTGGGTTTGTACAAAGGCTACTAGCCATTGCTACAGA 1161
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367 rIleLeuPheAlaLeuGlyLeuTyrAsnGlyThrLysProLeuSerThr 384
1162 CTCTCTGTTGAATCTATTGAAGAAACAGAGGTTACGCTCTCTTGAGCT 1211
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384 hrThrValGlnAsnIleThrGlnThrAspGlyPheSerSerAlaThrPhe 400
1212 GTTCCATTCGCTGCTAGAGCTTACGTTGAATGATGCAATGTAAGCTGA 1261
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seq_documentation_block:
; Sequence 32, Application US/08419448
; Patent No. 5863533
; GENERAL INFORMATION:
; APPLICANT: Robert F.M. Van Gorcom
; APPLICANT: Willem Van Hartingsveldt
; APPLICANT: Petrus A. Van Paridon
; APPLICANT: Annemarie E. Veenstra
; APPLICANT: Rudolf G.M. Luttin
; APPLICANT: Gerardus Sellen
; TITLE OF INVENTION: Cloning and Expression of Microbial
; TITLE OF INVENTION: Phytase
; NUMBER OF SEQUENCES: 52
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Ave. N.W., Suite 5500
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/419,448
; FILING DATE: 10-APR-1995
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H.
; REGISTRATION NUMBER: 29, 959
; REFERENCE/DOCKET NUMBER: 24615-20026.10
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-1500
; INFORMATION FOR SEQ ID NO: 32:

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: SEQUENCE CHARACTERISTICS:
:   LENGTH: 467 amino acids
:   TYPE: amino acid
:   TOPOLOGY: linear
:   MOLECULE TYPE: protein
:   US-08-419-448-32

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Align seg 1/1 to: US-08-419-448-32 from: 1 to: 467

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62 ATCCGGTACCGCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 111
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262 CTGATATACCAACTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 311
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117 SerThrTyrAsnTyrSerLeuGlyAlaAspAspLeuThrProPheGlyGlu 134
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151 ThrArgSerIleValProPheIleArgSerSerGlySerSerArgValIle 167
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1112 TATTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1161
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367 rIleLeuPheAlaLeuGlyLeuTyrAsnGlyThrLysProLeuSerThr 384
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384 hrThrValGluAsnIleThrGlnThrAspGlyPheSerSerAlaThrPhe 400
1212 GTTCATTCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1261
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401 ValProPheAlaSerArgLeuTyrValGlnMetCetIleGlnAlaGln 417
1262 AAAGAACCATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1311
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417 uGlnGlnProLeuValAlaValLeuValAlaAsnAspArgValValProLeu 434
1312 ACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1361
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seq_documentation_block:
: Sequence 3, Application US/08819825
: Patent No. 5866118
: GENERAL INFORMATION:
:   APPLICANT: Berka, Randy M.
:   APPLICANT: Ray, Michael W.
:   TITLE OF INVENTION: Polypeptides Having Phylase Activity
:   TITLE OF INVENTION: And Nucleic Acids Encoding Same
:   NUMBER OF SEQUENCES: 5

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seq_documentation_block:
; Sequence 3, Application US/09163642
; Patent No. 6221644
; GENERAL INFORMATION:
; APPLICANT: Berka, Randy M.
; APPLICANT: Ray, Michael W.
; APPLICANT: Klotz, Alan V.
; TITLE OF INVENTION: Polypeptides Having Phytase Activity
; TITLE OF INVENTION: And Nucleic Acids Encoding Same
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESS: No. 62216440 No. 6221644disk of No. 6221644th America, Inc.
; STREET: 405 Lexington Avenue, Suite 6400
; CITY: New York
; STATE: New York
; COUNTRY: U.S.A.
; ZIP: 10174-6401
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/163,642
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/819,825
; FILING DATE: 18-MAR-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Lambiris, Elias J.
; REGISTRATION NUMBER: 33,728
; REFERENCE/DOCKET NUMBER: 4758,200-US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 212 867 0123
; TELEFAX: 212 867 0298
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
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Ratio: 4.433 Gaps: 0
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367 rIleLeuPheAlaLeuGlyLeuTyrAsnGlyThrLysProLeuSerThrT 384
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: Sequence 3, Application US/09155855
: Patent No. 6139902
: GENERAL INFORMATION:
: APPLICANT: KONDO, Hidemasa
: APPLICANT: ANAZAWA, Hidenaru
: APPLICANT: KANEKO, Syunichi
: APPLICANT: NAGASHIMA, Tadashi
: APPLICANT: TANGE, Tatsuya
: TITLE OF INVENTION: NOVEL PHYLASE AND GENE ENCODING SAID PHYLASE
: FILE REFERENCE: 81356/124
: CURRENT APPLICATION NUMBER: US/09/155,855
: EARLIER FILING DATE: 1998-10-05
: EARLIER APPLICATION NUMBER: WO PCT/JP97/01175
: EARLIER FILING DATE: 1997-04-04
: EARLIER APPLICATION NUMBER: JP 084314
: NUMBER OF SEQ ID NOS: 7
: SOFTWARE: PatentIn Ver. 2.0
: SEQ ID NO 3
: LENGTH: 467
: TYPE: PRT
: ORGANISM: Aspergillus niger
: US-09-155-855-3

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  Quality: 1855.00      Length: 467
  Ratio: 4.396          Gaps: 0
  Percent Similarity: 90.364      Percent Identity: 73.448

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17 rSerGlyLeuAlaValProAlaSerArgAsnGlnSerThrCysAspThr 34
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51 TyrAlaProPhePheSerLeuAlaAsnLysSerAlaIleSerProAspVa 67
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84 lArgTyrProThrAspSerGlyLysLysTyrSerAlaLeuIleGlu 100
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101 GluIleGlnGlnAlaThrThrPheGlnGlyLysTyrAlaIleLeuIle 117
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117 sThrTyrAsnTyrSerLeuGlyAlaAspAspLeuThrProPheGlyGluG 134
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317 lGlyTyrAlaAsnGlnIlyLeuIleAlaArgLeuThrIleSerProValIleAs 334
1012 ASCACACTTCTACTAACCCACACTTGGACTTACCCAGCTTCTTCCCA 1061
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434 lSeIlyCysProValAlaAspAlaLeuGlnIlyArgCysThrArgAspSerPheVal 450
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451 LysGlyLeuSerPheAlaArgSerGlyGlyAspThrGlyGlyCysPheAl 467
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Mon Jul 8 08:27:53 2002

us-09-488-265-25.n2p.ra1

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GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: July 3, 2002, 09:30:41 ; Search time 39.56 Seconds

(without alignments)  
288,341 Million cell updates/sec

Title: US-09-488-265-26

Perfect score: 2470  
Sequence: 1 MGFTVVLSTATLFGSTSGT.....DEVEGLSFARSGGNWEECPA 467

Scoring table: BL0SUM62

Gapop 10.0 , Gapext 0.5

Searched: 231628 seqs, 2442594 residues

Total number of hits satisfying chosen parameters: 231628

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%  
Listing first 45 summaries

Database :

Issued\_Patents\_AA:\*  
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Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

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2	2173	88.0	467	4	US-09-121-425-2
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5	1866	75.5	467	1	US-07-923-724-8
6	1866	75.5	467	2	US-08-609-425A-8
7	1866	75.5	467	2	US-08-374-652C-2
8	1862	75.4	467	1	US-08-151-574-32
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12	1862	75.4	467	2	US-08-819-825-3
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14	1862	75.4	467	4	US-09-233-510-32
15	1855	75.1	467	4	US-09-155-855-3
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42	354.5	14.4	468	1	US-07-627-539G-2	Sequence 7, Appli
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#### ALIGNMENTS

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; Sequence 1, Application US/09121425
; Patent No. 6153418
; GENERAL INFORMATION:
; APPLICANT: Lehmann, Martin
; TITLE OF INVENTION: Consensus Phytases
; FILE REFERENCE: Consensus Phytases 13239
; CURRENT APPLICATION NUMBER: US/09/121,425
; EARLIER FILING DATE: 1998-07-23
; EARLIER APPLICATION NUMBER: EPO 97112688.3
; EARLIER FILING DATE: 1997-07-24
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 441
; TYPE: PRT
; ORGANSIM: Artificial Sequence
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; OTHER INFORMATION: Description of Artificial Sequence:consensus
US-09-121-425-1

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Best local Similarity 92.7%  Pred. No. 4.3e-222;
Matches 409; Conservative 13; Mismatches 19; Indels 0; Gaps 0;

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Db 121 YKALARKIVPPVRSAGSDRYTASAEKTEGFSQAKIADPGANPHQASPVINVIIPESAGY 180

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QY 267 DTVARTDAIQLSPFCDLFTHEMIQDYDLSGKYYGAGNPLGPAQGVGFVNLIAR 326
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QY 327 LTHSPVDHFTSTNHTLDSNPATFPLNATLYADPSHNTWVSIFPAGLNGKRPJSTISV 386
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```





APPLICANT: Paloheimo, Maria T.  
APPLICANT: Miettinen-Oinonen, Arja S.K.  
APPLICANT: Torkkeli, Tuula K.  
APPLICANT: Cantrell, Michael  
APPLICANT: Piddington, Christopher S.  
APPLICANT: Rambosek, John A.  
APPLICANT: Turunen, Maria K.  
APPLICANT: Fagerstr m, Richard B.  
TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
NUMBER OF SEQUENCES: 66  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
STREET: 1100 New York Avenue, Suite 600  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/923,724  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/496,155  
FILING DATE: 19-MAR-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/044,077  
FILING DATE: 29-APR-1987  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 8610600  
FILING DATE: 30-APR-1986  
ATTORNEY/AGENT INFORMATION:  
NAME: Cimbal, Michele A.  
REGISTRATION NUMBER: 33,851  
REFERENCE/DOCKET NUMBER: 1050.0240004  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 371-2600  
TELEFAX: (202) 371-2540  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-923-724-8

Query Match 75.5%; Score 1866; DB 1; Length 467;  
Best Local Similarity 74.5%; Pred. No. 2.3e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

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DB 1 MGVSALLPLLYLAGVTSGLAVPASRNOSTCDVDOGTCFSTSHLMQVAPFSLANE 60

QY 61 SAISPDVPGKGRVTFVQVLSRHGARYPTSSKSKYSALIEALIOKNATARKGAFLKTVN 120  
DB 61 SAISPDVPGKGRVTFVQVLSRHGARYPTSSKSKYSALIEALIOKNATARKGAFLKTVN 120

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DB 121 YTGADDLTFPGQOMVNSGIAKFRYRKALAKIVPVRASGSDRYIASAEKFIESFQSA 180

QY 181 KLADPGANPHQASPVINVIIPBAGYNNLTHGLCTAFESSEIGDVEANPFAVAPPR 240  
DB 181 KLADPGANPHQASPVINVIIPBAGYNNLTHGLCTAFESSEIGDVEANPFAVAPPR 240

QY 241 ARLEAHLPGVNLDEDEVNIMDMCPFDVARTSDATQLSPFCDLFTHDEMIQDYDLQSLG 300

DB 241 QRELENDLSGVTILDTFVETIYLMDCMSFDTISTSTVDKRLSPFCLFTHDEMIHVDYLSLK 300  
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DB 301 KYGYGAGNPLGPAQGVFVNEIARLTHSPVODHTSTNHTLDSNPATPLNATLYADS 360  
QY 361 HDNTMVSIFPALGLXNTRKPLSTTSVSEIEPDGXAASWTPFAARAYVEMQCEAEKEP 420  
DB 361 HDNTMVSIFPALGLXNTRKPLSTTSVSEIEPDGXAASWTPFAARAYVEMQCEAEKEP 420  
QY 421 LVRVYVNDRVVPLHGCVDKLGRCRDPDEVEGLSFARSGGNWEECPA 467  
DB 421 LVRVYVNDRVVPLHGCVDKLGRCRDPDEVEGLSFARSGGNWEECPA 467

RESULT 6  
US-08-609-426A-8  
Sequence 8, Application US/08609426A  
Patent No. 5830733  
GENERAL INFORMATION:  
APPLICANT: Nevalainen, Helena K.M.  
APPLICANT: Paloheimo, Maria T.  
APPLICANT: Miettinen-Oinonen, Arja S.K.  
APPLICANT: Torkkeli, Tuula K.  
APPLICANT: Cantrell, Michael  
APPLICANT: Piddington, Christopher S.  
APPLICANT: Rambosek, John A.  
APPLICANT: Turunen, Maria K.  
APPLICANT: Fagerstr m, Richard B.  
TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
NUMBER OF SEQUENCES: 69  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
STREET: 1100 New York Avenue, Suite 600  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/609,426A  
FILING DATE: 01-MAR-1996  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,724  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/496,155  
FILING DATE: 19-MAR-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/044,077  
FILING DATE: 29-APR-1987  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 8610600  
FILING DATE: 30-APR-1986  
ATTORNEY/AGENT INFORMATION:  
NAME: Reed, Grant E.  
REGISTRATION NUMBER: P-41,264  
REFERENCE/DOCKET NUMBER: 1050.0080001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 371-2600  
TELEFAX: (202) 371-2540  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid

TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-609-426A-8

Query Match 75.5%; Score 1866; DB 2; Length 467;  
Best Local Similarity 74.5%; Pred. No. 2,3e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

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QY 1 MGVFVLLSIATLFGSTGTAALPGNGSHSCDPTVDGQYQCPPEISHLMGQYSPFSLADE 60
DB 1 MGVSAVLLPLYLAVTSGSLAVPASRNSCTCTVDQGYQCFSESHLMGQYAPFESLANE 60
QY 61 SAISPDVPGKCVTFVQVLSRHGARYPTSSKSKYSALIEAIOKATAFKGKAFKLYN 120
DB 61 SAISPDVPGKCVTFVQVLSRHGARYPTSSKSKYSALIEAIOKATAFKGKAFKLYN 120
QY 121 YTLGADDLTPFEGEOMVNSGKIFRYRALKARKIVFVRASGSDRVIASAEKTEGQSA 180
DB 121 YSLGADDLTPFEGEOLVNSGKIFQRESLRNIIPIFRSSGSSRVIASGKEFEGQST 180
QY 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDDVEANFTAVFAPPIR 240
DB 181 KLKDPRAOPGQSSPKIDVIVSEASSNNITLDPGCTVPEDESLADYVEANFTAFAPSIR 240
QY 241 ARLEAHLPGVNLTDEDVYNLMDKCPFTVARTSDATQLSPPCDLFTHDEWIQYDLOSLG 300
DB 241 QLENDLSGVTLTDEYVYLLMDKCSFDTISTVDTKLSPCDLFTHDEWIHYDYLQSLK 300
QY 301 KYGYGAGNPLGPAQGVFVNEELARLHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360
DB 301 KYGHGAGNPLGPTQGVYANELLARLHSHVHDITSNHTLDSNPATFPLNSTLYADFS 360
QY 361 HDNTMVSIFPALGYNKTKPLSTTSVESIEETDGYAASMTVPFAARAYVEMOCEAKEP 420
DB 361 HDNGIISILFALGLYNGKPLSTTVENITOTDGFSSAMTVFPASRLYVEMOQAOBEP 420
QY 421 LVRLVNDRVVPLHGCYVDKLGRCRKDDFEVGLSFARSGGWMECEFA 467
DB 421 LVRLVNDRVVPLHGCYVDKLGRCRKDDFEVGLSFARSGGWMECEFA 467

```

RESULT 7  
US-08-374-652C-2  
Sequence 2, Application US/08374652C  
Patent No. 5834286  
GENERAL INFORMATION:  
APPLICANT: NEVALAINEN, HELENA K.M.  
APPLICANT: PALOHEIMO, MARJA T.  
APPLICANT: FAGERSTROM, RICHARD B.  
APPLICANT: MIETTINEN-OINONEN, ARJA S.  
APPLICANT: TURUNEN, MARIA K.  
APPLICANT: RAMBOSEK, JOHN A.  
APPLICANT: PIDDINGTON, CHRISTOPHER S.  
APPLICANT: HOOSTON, CHRISTINE S.  
TITLE OF INVENTION: RECOMBINANT CELLS, DNA CONSTRUCTS,  
TITLE OF INVENTION: VECTORS AND METHODS FOR EXPRESSING PHYTATE DEGRADING  
ENZYME OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERN, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/374,652C  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07058  
FILING DATE: 27-JUL-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/925,401  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: REED, GRANT E.  
REGISTRATION NUMBER: 41,264  
REFERENCE/DOCKET NUMBER: 1050,071001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ. ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: not relevant  
MOLECULE TYPE: protein  
US-08-374-652C-2

Query Match 75.5%; Score 1866; DB 2; Length 467;  
Best Local Similarity 74.5%; Pred. No. 2,3e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

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QY 1 MGVFVLLSIATLFGSTGTAALPGNGSHSCDPTVDGQYQCPPEISHLMGQYSPFSLADE 60
DB 1 MGVSAVLLPLYLAVTSGSLAVPASRNSCTCTVDQGYQCFSESHLMGQYAPFESLANE 60
QY 61 SAISPDVPGKCVTFVQVLSRHGARYPTSSKSKYSALIEAIOKATAFKGKAFKLYN 120
DB 61 SAISPDVPGKCVTFVQVLSRHGARYPTSSKSKYSALIEAIOKATAFKGKAFKLYN 120
QY 121 YTLGADDLTPFEGEOMVNSGKIFRYRALKARKIVFVRASGSDRVIASAEKTEGQSA 180
DB 121 YSLGADDLTPFEGEOLVNSGKIFQRESLRNIIPIFRSSGSSRVIASGKEFEGQST 180
QY 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDDVEANFTAVFAPPIR 240
DB 181 KLKDPRAOPGQSSPKIDVIVSEASSNNITLDPGCTVPEDESLADYVEANFTAFAPSIR 240
QY 241 ARLEAHLPGVNLTDEDVYNLMDKCPFTVARTSDATQLSPPCDLFTHDEWIQYDLOSLG 300
DB 241 QLENDLSGVTLTDEYVYLLMDKCSFDTISTVDTKLSPCDLFTHDEWIHYDYLQSLK 300
QY 301 KYGYGAGNPLGPAQGVFVNEELARLHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360
DB 301 KYGHGAGNPLGPTQGVYANELLARLHSHVHDITSNHTLDSNPATFPLNSTLYADFS 360
QY 361 HDNTMVSIFPALGYNKTKPLSTTSVESIEETDGYAASMTVPFAARAYVEMOCEAKEP 420
DB 361 HDNGIISILFALGLYNGKPLSTTVENITOTDGFSSAMTVFPASRLYVEMOQAOBEP 420
QY 421 LVRLVNDRVVPLHGCYVDKLGRCRKDDFEVGLSFARSGGWMECEFA 467
DB 421 LVRLVNDRVVPLHGCYVDKLGRCRKDDFEVGLSFARSGGWMECEFA 467

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RESULT 8  
US-08-151-574-32  
Sequence 32, Application US/08151574  
Patent No. 5436156  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon



APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luttich  
APPLICANT: Gerardus Sellen  
TITLE OF INVENTION: Cloning and Expression of Microbial  
TITLE OF INVENTION: Phytase  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Morrison & Foerster  
STREET: 545 Middlefield Road, Suite 200  
CITY: Menlo Park  
STATE: California  
COUNTRY: USA  
ZIP: 94025-3471  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
SOFTWARE:  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/151,574  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/688,578  
FILING DATE: 24-MAY-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.00  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-327-7250  
INFORMATION FOR SEQ ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-151-574-32

Query Match 75.4%; Score 1862; DB 1; Length 467;  
Best Local Similarity 74.5%; Pred. No. 6,1e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

QY 1 MGVFVLLSIATLFGSTGFGALGPRGNHSCDVTGQCEPFIHMGQYSPFFSLADE 60  
DB 1 MGVSAVLLPLYLSTGSLAVPASRNQSCDVTGQCEPFIHMGQYSPFFSLANE 60

QY 61 SAISPDVPGRCRTFVQVLSRHGARYPTSSKSKYSALIEAIONKATAFKAFLKTYN 120  
DB 61 SVISPEVAGRCRTFAQVLSRHGARYPTSSKSKYSALIEAIONKATFDGKATFLKTYN 120

QY 121 YTLGADDLTPFGEOQMVNSGKIFRRYKALARKIYFVRASGSDRYASAEEKFEGFOSA 180  
DB 121 YSLGADDLTPFGEOELVNSGKIFQRYESLTRNIVPFISSGSSRYASGKFFEGFOSA 180

QY 181 KLADPGANPHQASPVYINVIIPGAGYNNLIDHGLCTAFEESELGDVEANFTAVFAPPIR 240  
DB 181 KLADPGANPHQASPVYINVIIPGAGYNNLIDHGLCTAFEESELGDVEANFTAVFAPPIR 240

QY 241 ARLEAHLPGVNLTDDEVVNLMDMCPDVTARTSDATQLSPPCDLFTHDEMIQYDYLQSLG 300  
DB 241 QRLLENDLSGTYLTDTEVTYIMDMCSFDITSTVDTKLSPFDLFTHDEMINVDYLQSLK 300

QY 301 KYTGAGANPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNATPPLNATLYADRS 360  
DB 301 KYTGAGANPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNATPPLNATLYADRS 360

QY 361 HDNTMVSIFPALGYNKTRKLTSTSVESIEETDGYASWTPPAAARYEMMOCEAEKEP 420  
DB 361 HDNIIISILPALGYNKTRKLTSTSVENITQDGFSSAMTVPFASRLYVEMMOCEAEKEP 420

QY 421 LVRLVNDVRVPLHGGVDKIGRCKRDDFVGLISFARSGGNMECEFA 467  
DB 421 LVRLVNDVRVPLHGGVDKIGRCKRDDFVGLISFARSGGNMECEFA 467

RESULT 9  
US-08-146-424-20  
Sequence 20, Application US/08146424  
Patent No. 5593963  
GENERAL INFORMATION:  
APPLICANT: VAN OIJTEN, ALBERT J. J.  
APPLICANT: RIETVELD, KRIJN  
APPLICANT: HOEKEMA, ANDREAS  
APPLICANT: BEN, JAN  
APPLICANT: STUMONS, PETER C.  
APPLICANT: VERMOERD, TEUNIS C.  
TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS  
NUMBER OF SEQUENCES: 31  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: MORRISON & FOERSTER  
STREET: 755 Page Mill Road  
CITY: Palo Alto  
STATE: California  
COUNTRY: USA  
ZIP: 94304-1018  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/146,424  
FILING DATE: 02-NOV-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: KENNEDY, BILL  
REGISTRATION NUMBER: 33,407  
REFERENCE/DOCKET NUMBER: 44615-20011.24  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (415) 813-5600  
TELEFAX: (415) 494-0792  
TELEX: 706141  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-146-424-20

Query Match 75.4%; Score 1862; DB 1; Length 467;  
Best Local Similarity 74.5%; Pred. No. 6,1e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

QY 1 MGVFVLLSIATLFGSTGFGALGPRGNHSCDVTGQCEPFIHMGQYSPFFSLADE 60  
DB 1 MGVSAVLLPLYLSTGSLAVPASRNQSCDVTGQCEPFIHMGQYSPFFSLANE 60

QY 61 SAISPDVPGRCRTFVQVLSRHGARYPTSSKSKYSALIEAIONKATAFKAFLKTYN 120  
DB 61 SVISPEVAGRCRTFAQVLSRHGARYPTSSKSKYSALIEAIONKATFDGKATFLKTYN 120

QY 121 YTLGADDLTPFGEOQMVNSGKIFRRYKALARKIYFVRASGSDRYASAEEKFEGFOSA 180  
DB 121 YSLGADDLTPFGEOELVNSGKIFQRYESLTRNIVPFISSGSSRYASGKFFEGFOSA 180

QY 181 KLADPGANPHQASPVYINVIIPGAGYNNLIDHGLCTAFEESELGDVEANFTAVFAPPIR 240  
DB 181 KLADPGANPHQASPVYINVIIPGAGYNNLIDHGLCTAFEESELGDVEANFTAVFAPPIR 240

QY 241 ARLEAHLPGVNLTDDEVVNLMDMCPDVTARTSDATQLSPPCDLFTHDEMIQYDYLQSLG 300  
DB 241 ARLEAHLPGVNLTDDEVVNLMDMCPDVTARTSDATQLSPPCDLFTHDEMIQYDYLQSLG 300

Db 241 ORLENDLSGVTLLDTEVYTLMDMCSFDITSTYDTKLSPCDLFTHEWIMINDYLOS LK 300  
QY 301 KYTGAGNPLGPAGVGCVNELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360  
Db 301 KYTGAGNPLGPAGVGCVNELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360  
QY 361 HDNMTVSIFLALGNGTKPLSTSVESIEETDGYAASWYVFAARAYEMMOCEAKEP 420  
Db 361 HDNMTVSIFLALGNGTKPLSTSVESIEETDGYAASWYVFAARAYEMMOCEAKEP 420  
QY 421 LVRVLVNDRVVPLHGCYVDKLGRCRDEVEGLSFARSGGNMECEFA 467  
Db 421 LVRVLVNDRVVPLHGCYVDKLGRCRDEVEGLSFARSGGNMECEFA 467

RESULT 10  
US-08-693-709-2  
Sequence 2, Application US/08693709  
Patent No. 5770413  
GENERAL INFORMATION:  
APPLICANT: VAN COIJEN, ALBERT J.J.  
APPLICANT: RIEVELD, KRION  
APPLICANT: HOEKEMA, ANDREAS  
APPLICANT: PEN, JAN  
APPLICANT: SIMONS, PETER C.  
APPLICANT: VERMOERD, TENDIS C.  
TITLE OF INVENTION: THE EXPRESSION OF PHYTASE  
NUMBER OF SEQUENCES: 28  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: MORRISON & FOERSTER  
STREET: 755 PAGE MILL ROAD  
CITY: Palo Alto  
STATE: CA  
COUNTRY: USA  
ZIP: 94304-1018  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/693,709  
FILING DATE: 07-AUG-1996  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/146,424  
FILING DATE: 02-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20011.10  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-813-5600  
TELEFAX: 415-494-0792  
TELEX: 706141  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
FEATURE:  
NAME/KEY: Signal Sequence  
LOCATION: 1...23  
OTHER INFORMATION:  
US-08-693-709-2

Query Match 75.4%; Score 1862; DB 1; Length 467;  
Best Local Similarity 74.5%; Pred. No. 6,1e-188;

Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;  
QY 1 MGFFVLLSIATLFGSTGALGPRGNHSCTVDGVCQFPEISHLWQVSPFSLADE 60  
Db 1 MGSAVALLPLLYLLSGVSLGAVPASRNOSCDTVGQYCFSESHLWQVAPFSLANE 60  
QY 61 SAISPDVPGKRYTEFVQVSRHGRARYPTSSKSKYSALIEALOKNATFKGVATLKYN 120  
Db 61 SVISPEVPAGCARTFQOVLSRHGARKPTDSKKTTSALIEALQNAATFDGATYATLKYN 120  
QY 121 YTLGADDLTFPEBQOVNSGIFKFRYRYALARKIYFVPASGSDRVIASAEKFIGFOSA 180  
Db 121 YSLGADDLTFPEBQOVNSGIFKFRYRYALARKIYFVPASGSDRVIASAEKFIGFOSA 180  
QY 181 KLADPGANPHOASPVYINVIIPGAGYNNLDBGLCTAEBSGLGDVDEANFTAVFAPIR 240  
Db 181 KLADPGANPHOASPVYINVIIPGAGYNNLDBGLCTAEBSGLGDVDEANFTAVFAPIR 240  
QY 241 ARLEAHLPGVNLDEDVVNLMDMCPEDIVARTDQATOLSPFCDLFTHEWIMINDYLOS LK 300  
Db 241 ORLENDLSGVTLLDTEVYTLMDMCSFDITSTYDTKLSPCDLFTHEWIMINDYLOS LK 300  
QY 301 KYTGAGNPLGPAGVGCVNELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360  
Db 301 KYTGAGNPLGPAGVGCVNELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADFS 360  
QY 361 HDNMTVSIFLALGNGTKPLSTSVESIEETDGYAASWYVFAARAYEMMOCEAKEP 420  
Db 361 HDNMTVSIFLALGNGTKPLSTSVESIEETDGYAASWYVFAARAYEMMOCEAKEP 420  
QY 421 LVRVLVNDRVVPLHGCYVDKLGRCRDEVEGLSFARSGGNMECEFA 467  
Db 421 LVRVLVNDRVVPLHGCYVDKLGRCRDEVEGLSFARSGGNMECEFA 467

RESULT 11  
US-08-419-448-32  
Sequence 32, Application US/08419448  
Patent No. 5863533  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon  
APPLICANT: Anemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luttin  
TITLE OF INVENTION: Cloning and Expression of Microbial  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Morrison & Foerster  
STREET: 2000 Pennsylvania Ave. N.W., Suite 5500  
CITY: Washington  
STATE: D.C.  
COUNTRY: USA  
ZIP: 20006-1888  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/419,448  
FILING DATE: 10-APR-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.10  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-887-1500  
INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:  
 LENGTH: 467 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 US-08-419-448-32

Query Match 75.4%; Score 1862; DB 2; Length 467;  
 Best Local Similarity 74.5%; Pred. No. 6.1e-188;  
 Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

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QY 1 MGVFVLLSIATLFGSTGTLGPRGNSHSCDVTVDGYQCFPEISHLMOGYSPFSLADE 60
    ||| ||| : ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 MGVSAVLLPLYLISGVTSGGLAVPASRNOSCDVTVDGYQCFSESHLMGOYAPFSLANE 60
QY 61 SAISPDVPRGCRVTFVQVLSRHGARYPTSSKSKYSALIEAIQKNATAFKGYAFKTYN 120
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 SVISPEVPACGRVTFVQVLSRHGARYPTDSKGRKYSALIEIQNNATTFDGKAYFLKTYN 120
QY 121 YTLGADDLTPREGQOMVNSGKIFRYRKALARKIVPFRASGSDRYIASAEKFTIEGFOSA 180
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 121 YSLGADDLTPREGQELVNSGKIFORYESLIRNIVPFRSSGSSRYIASGKFTIEGFOST 180
QY 181 KLADPGANPHQASPVINVIIEGAGYNNTLDHGLCTAEESLGDVDEANFTAVFAPPIR 240
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 181 KLKDPRAOPGOSPKRIDVYISASSNNITLDPGCTVFEDESLADVTAEANFTAVFAPPIR 240
QY 241 ARLEAHLPGVNLTFDEYVNLMDMCPEDTVARTSDATQISPCDILFTHDEMIOXYDLOSIG 300
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 241 ORLENDLSGVTLLDTETVYLLMDKCSFDITISTVDTKLSPCDILFTHDEMIVNDYLOSIG 300
QY 301 KYYGAGNPLGPAQGVGFVNELIARLTHSPYQDHTSTNHTLDSNPATFPPLNATLYADFS 360
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 301 KYYGAGNPLGPTQGVGVANELLARLTHSPVHDDTSSNHTLDSNPATFPPLNSTLYADFS 360
QY 361 HDNTWVSIFPALGLXNGTKPLSTTSVESIEETDGYAASWTVPFARAYVEMQCAEKEP 420
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 361 HDNGIISILFALGLXNGTKPLSTTVERITITQTDGFSAMTVPFARSLYVEMQCAEKEP 420
QY 421 LVRVLYNDRVYVPLHGCGVDKLGRCRDEVEGLSFARSGNMECEFA 467
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 421 LVRVLYNDRVYVPLHGCPVDALGRCTRDSFVRGLSFARSGGDMAECPA 467

```

RESULT 12  
 US-08-819-825-3  
 ; Sequence 3, Application US/08819825  
 ; Patent No. 5866118

GENERAL INFORMATION:  
 APPLICANT: Berka, Randy M.  
 APPLICANT: Ray, Michael W.  
 APPLICANT: Klotz, Alan V.  
 TITLE OF INVENTION: Polypeptides Having Phytase Activity  
 TITLE OF INVENTION: And Nucleic Acids Encoding Same  
 NUMBER OF SEQUENCES: 5  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: No. 58661180 No. 5866118disk of No. 5866118th America, Inc.  
 STREET: 405 Lexington Avenue, Suite 6400

CITY: New York  
 STATE: New York  
 COUNTRY: U.S.A.  
 ZIP: 10174-6401  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Diskette  
 COMPUTER: IBM Compatible  
 OPERATING SYSTEM: DOS  
 SOFTWARE: FASTSEQ for Windows Version 2.0  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/819, 825  
 FILING DATE: 18-MAR-1997  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:

NAME: lambiris, Elias J.  
 REGISTRATION NUMBER: 33,728  
 REFERENCE/DOCKET NUMBER: 4758.200-US  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 212 867 0123  
 TELEFAX: 212 867 0298  
 INFORMATION FOR SEQ ID NO: 3:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 467 amino acids  
 TYPE: amino acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 US-08-819-825-3

Query Match 75.4%; Score 1862; DB 2; Length 467;  
 Best Local Similarity 74.5%; Pred. No. 6.1e-188;  
 Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

```

QY 1 MGVFVLLSIATLFGSTGTLGPRGNSHSCDVTVDGYQCFPEISHLMOGYSPFSLADE 60
    ||| ||| : ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 MGVSAVLLPLYLISGVTSGGLAVPASRNOSCDVTVDGYQCFSESHLMGOYAPFSLANE 60
QY 61 SAISPDVPRGCRVTFVQVLSRHGARYPTSSKSKYSALIEAIQKNATAFKGYAFKTYN 120
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 SVISPEVPACGRVTFVQVLSRHGARYPTDSKGRKYSALIEIQNNATTFDGKAYFLKTYN 120
QY 121 YTLGADDLTPREGQOMVNSGKIFRYRKALARKIVPFRASGSDRYIASAEKFTIEGFOSA 180
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 121 YSLGADDLTPREGQELVNSGKIFORYESLIRNIVPFRSSGSSRYIASGKFTIEGFOST 180
QY 181 KLADPGANPHQASPVINVIIEGAGYNNTLDHGLCTAEESLGDVDEANFTAVFAPPIR 240
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 181 KLKDPRAOPGOSPKRIDVYISASSNNITLDPGCTVFEDESLADVTAEANFTAVFAPPIR 240
QY 241 ARLEAHLPGVNLTFDEYVNLMDMCPEDTVARTSDATQISPCDILFTHDEMIOXYDLOSIG 300
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 241 ORLENDLSGVTLLDTETVYLLMDKCSFDITISTVDTKLSPCDILFTHDEMIVNDYLOSIG 300
QY 301 KYYGAGNPLGPAQGVGFVNELIARLTHSPYQDHTSTNHTLDSNPATFPPLNATLYADFS 360
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 301 KYYGAGNPLGPTQGVGVANELLARLTHSPVHDDTSSNHTLDSNPATFPPLNSTLYADFS 360
QY 361 HDNTWVSIFPALGLXNGTKPLSTTSVESIEETDGYAASWTVPFARAYVEMQCAEKEP 420
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 361 HDNGIISILFALGLXNGTKPLSTTVERITITQTDGFSAMTVPFARSLYVEMQCAEKEP 420
QY 421 LVRVLYNDRVYVPLHGCGVDKLGRCRDEVEGLSFARSGNMECEFA 467
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 421 LVRVLYNDRVYVPLHGCPVDALGRCTRDSFVRGLSFARSGGDMAECPA 467

```

RESULT 13  
 US-09-163-642-3  
 ; Sequence 3, Application US/09163642  
 ; Patent No. 6221644

GENERAL INFORMATION:  
 APPLICANT: Berka, Randy M.  
 APPLICANT: Ray, Michael W.  
 APPLICANT: Klotz, Alan V.  
 TITLE OF INVENTION: Polypeptides Having Phytase Activity  
 TITLE OF INVENTION: And Nucleic Acids Encoding Same  
 NUMBER OF SEQUENCES: 5  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: No. 62216440 No. 6221644disk of No. 6221644th America, Inc.  
 STREET: 405 Lexington Avenue, Suite 6400

CITY: New York  
 STATE: New York  
 COUNTRY: U.S.A.  
 ZIP: 10174-6401  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Diskette  
 COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/163,642  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,825  
FILING DATE: 18-MAR-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: Lamberts, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4758,200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212 867 0123  
TELEFAX: 212 867 0298  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
US-09-163-642-3

Query Match 75.4%; Score 1862; DB 4; Length 467;  
Best Local Similarity 74.5%; Pred. No. 6,1e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

QY 1 MGAVVLLSTATLFGSTGALPGRNHSCDTPVDGYOCFPEISHLMGOYSPFSLADE 60  
DB 1 MGAVALLPLLYLISGTVSLGAVPASNOSCDTPVDGYOCFSETSHLMGOYAFPSLANE 60  
QY 61 SATSPVPGKCRVTFVOVLSRHGARYPTSSKSKYSALIEAIOKNATARKYAFLEKTYN 120  
DB 61 SATSPVPGKCRVTFVOVLSRHGARYPTSSKSKYSALIEAIOKNATARKYAFLEKTYN 120  
QY 121 YTLGADDLTPFGEOQVWNSGIRFYRRYKALARKIVFVNASGSDVIAAEKFIGFQSA 180  
DB 121 YSLGADDLTPFGEOQLVNSGIRFYQRESLTNIVPFISSSSSVIASGKKEFIGFQST 180  
QY 181 KLADPGANHQASPVINVTIPEGAGYNNTLDHGLCTAFEESELGDDVEANFTAVPAPPIR 240  
DB 181 KLADPGANHQASPVINVTIPEGAGYNNTLDHGLCTAFEESELGDDVEANFTAVPAPPIR 240  
QY 241 ARLEAHLPGVNLTDEYVNLMDMCPEDIVARTSDATQLSPECDLTHDEMIOYDYLQSLG 300  
DB 241 QRLNDLSGVTLTDEYVNLMDMCPEDIVARTSDATQLSPECDLTHDEMIOYDYLQSLG 300  
QY 301 KYGGAGNPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNPATFPINATLYADF 360  
DB 301 KYGGAGNPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNPATFPINATLYADF 360  
QY 361 HDNTWVSIFPALGLYNGKPLSTSVESIEETDGYAASWTVFAARAVEMMOCEAEKEP 420  
DB 361 HDNGIISLIFALGLYNGKPLSTSTVENITQTDGFSAMTVFASRLYVEMMOCEAEKEP 420  
QY 421 LVRLVNDRVVPLHGCQVYDLGRCKRDVEVEGLSFARSGWMECEFA 467  
DB 421 LVRLVNDRVVPLHGCQVYDLGRCKRDVEVEGLSFARSGWMECEFA 467

RESULT 14  
US-09-233-510-32  
Sequence 32, Application US/09233510  
Patent No. 6350602  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon  
APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luitin  
APPLICANT: Gerardus Sellen

TITLE OF INVENTION: Cloning and Expression of Microbial  
TITLE OF INVENTION: Phytase  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Morrison & Foerster  
STREET: 545 Middlefield Road, Suite 200  
CITY: Menlo Park  
STATE: California  
COUNTRY: USA  
ZIP: 94025-3471  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/233,510  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/688,578  
FILING DATE: 24-MAY-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Mureshige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.00  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-327-7250  
TELEFAX: 415-327-2951  
INFORMATION FOR SEQ ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-233-510-32

Query Match 75.4%; Score 1862; DB 4; Length 467;  
Best Local Similarity 74.5%; Pred. No. 6,1e-188;  
Matches 348; Conservative 44; Mismatches 75; Indels 0; Gaps 0;

QY 1 MGAVVLLSTATLFGSTGALPGRNHSCDTPVDGYOCFPEISHLMGOYSPFSLADE 60  
DB 1 MGAVALLPLLYLISGTVSLGAVPASNOSCDTPVDGYOCFSETSHLMGOYAFPSLANE 60  
QY 61 SATSPVPGKCRVTFVOVLSRHGARYPTSSKSKYSALIEAIOKNATARKYAFLEKTYN 120  
DB 61 SATSPVPGKCRVTFVOVLSRHGARYPTSSKSKYSALIEAIOKNATARKYAFLEKTYN 120  
QY 121 YTLGADDLTPFGEOQVWNSGIRFYRRYKALARKIVFVNASGSDVIAAEKFIGFQSA 180  
DB 121 YSLGADDLTPFGEOQLVNSGIRFYQRESLTNIVPFISSSSSVIASGKKEFIGFQST 180  
QY 181 KLADPGANHQASPVINVTIPEGAGYNNTLDHGLCTAFEESELGDDVEANFTAVPAPPIR 240  
DB 181 KLADPGANHQASPVINVTIPEGAGYNNTLDHGLCTAFEESELGDDVEANFTAVPAPPIR 240  
QY 241 ARLEAHLPGVNLTDEYVNLMDMCPEDIVARTSDATQLSPECDLTHDEMIOYDYLQSLG 300  
DB 241 QRLNDLSGVTLTDEYVNLMDMCPEDIVARTSDATQLSPECDLTHDEMIOYDYLQSLG 300  
QY 301 KYGGAGNPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNPATFPINATLYADF 360  
DB 301 KYGGAGNPLGPAQGVFNELIARLTHSPVODHTSTNHTLDSNPATFPINATLYADF 360  
QY 361 HDNTWVSIFPALGLYNGKPLSTSVESIEETDGYAASWTVFAARAVEMMOCEAEKEP 420  
DB 361 HDNGIISLIFALGLYNGKPLSTSTVENITQTDGFSAMTVFASRLYVEMMOCEAEKEP 420  
QY 421 LVRLVNDRVVPLHGCQVYDLGRCKRDVEVEGLSFARSGWMECEFA 467  
DB 421 LVRLVNDRVVPLHGCQVYDLGRCKRDVEVEGLSFARSGWMECEFA 467



QY	1	NSHSCOTV-GRVC-PEISHLMGOVSPEPELADBSAISDPVPGKCRVTEYVOLSRHGRARY	58
Db	1	NSHSCOTVGGVQCPEPEISHLMGOVSPEPELADBSAISDPVDDCRVTEYVOLSRHGRARY	60
QY	59	PISSKSKKYSALIERIOKNAT-FKGKAEFKTYVYVLGADLTPPEGENOMNSGKIFPR	11
Db	61	PISSKSKKYSALIERIOKNATAEFGKAEFKTYVYVLGADLTPPEGENOMNSGKIFPR	120
QY	118	YKLAANIYPEFRAGSGSRVJASAEKPIEGEQSAKLADPA--HQASPVINVIIEPGSGY	17
Db	121	YKLAAKTYPEFRAGSGSRVJASAEKPIEGEQSAKLADPEQPHQASPVIDVYIEPGSGY	180
QY	175	NNTLDHGLCTAEESTLEDDDAENAFTEVFPAPPIRARLEA-LEGVNLTEDDVYVNLMDMCEP	23
Db	181	NNTLDHGCTAESESLDGDVEANFTALPAPRARLEADLEGVNLTEDDVYVNLMDMCEP	240
QY	234	DYVARSQATQUSPPCQFLTADEN-QYDYLOSL-KYGYGAGNPLGPAQOGVF-NELIAR	290
Db	241	ETVARSQATELSPCAFLTDEMRQDYLOSLGKYYGYGAGNPLGPAQOGVFANELIAR	300
QY	291	LTHSPVDQHTSNNTLDSNPATPEPLNATLYADSHNTVSLTFPALGLXNGTKPLSTTSV	350





Db 27 SKSCDITVDLGQCSPATSHLMGQSPFFSLEDELVSXSKLPKCRITLVYVLSRHGARYP 86  
QY 60 TSSKSKRYKYSALIERIQKNAT-FKGYAFLEKTYNTLGGADLTPEGENOMVNSGKRYRY 118  
Db 87 TSSKSKRYKYLVAIQANATDFKGRFAFLKTYNTLGGADLTPEGQOVLNSGKRYRY 146  
QY 119 KALARNVPEVRASGSDRVYASAEKFTIEGQSAKLADP-AHQASPVINVIPEGSGYNN 176  
Db 147 KALARSVPPIRASGSDRVYASAEKFTIEGQSAKLADPAGATNNAAPAIIVIPESSTFNN 206  
QY 177 TLDHGLCTAFEDSTLGGDAEANTAVAPPIRARLEA-LPGVVLTEDEVDVNLMDKCPDT 235  
Db 207 TLDHGVTCKFEASQOLGDEVANANTALFAPDIRAKRHLPGVLTDEVDVSLMDKCSFDT 266  
QY 236 VARTSDATQSLSPCQDLFTADEW-QYDYLOSL-KYGYGAGNPLGPAGGVF-NELIARLT 292  
Db 267 VARTSDASQSLSPCQDLFTHEMKRYNYLQSLGKYGYGAGNPLGPAGGVF-NELIARLT 326  
QY 293 HSPVODHTSTNHTLDSNPATFPPLNATLYADFSHDNTMVSIFPALGLYNGTKPLSTSVES 352  
Db 327 RSPVODHTSTNHTLDSNPATFPPLNATLYADFSHDNTMVSIFPALGLYNGTKPLSTSVES 386  
QY 353 I-ETDGYASWTVPFARAYVEMOCEAGGEGEKEPELVYVNDRVVPLHGGCVKL 411  
Db 387 AKELDGYASWTVPFARAYVETMCKS-----EKEPLVRLINDRVYVPLHGGCVKL 439  
QY 412 GRCKLDVEEGLSFARSGGNMAECPA 437  
Db 440 GRCKLNDVFKGLSWARSGGNMGECS 465

RESULT 4  
US-08-744-231-33  
; Sequence 33, Application US/08744231  
; Patent No. 6358722  
; GENERAL INFORMATION:  
; APPLICANT: Van Loon, Adolphus  
; APPLICANT: Mitchell, David  
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY  
; NUMBER OF SEQUENCES: 35  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hoffmann-La Roche Inc.  
; STREET: 340 Kingsland Street  
; CITY: Nutley  
; STATE: New Jersey  
; COUNTRY: United States of America  
; ZIP: 07110  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/744,231  
; FILING DATE:  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/424,757  
; FILING DATE: 18-APR-1995  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Kass, Alan P  
; REGISTRATION NUMBER: 32142  
; REFERENCE/DOCKET NUMBER: Case Docket 9339  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (201) 235-4205  
; TELEFAX: (201) 235-2365  
; INFORMATION FOR SEQ ID NO: 33:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 465 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:

NAME/KEY: misc\_feature  
LOCATION: 104  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 119  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 205  
OTHER INFORMATION: /note="potential N-glycosylation site"  
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LOCATION: 228  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 337  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 374  
OTHER INFORMATION: /note="potential N-glycosylation site"  
US-08-744-231-33

Query Match 75.9%; Score 1762.5; DB 4; Length 465;  
Best Local Similarly 77.4%; Pred. No. 3.4e-180;  
Matches 345; Conservative 36; Mismatches 48; Indels 17; Gaps 10;

QY 2 SHSCDITVD-GYQC-PEISHLMGQSPFFSLADESAISPDVPCRCRYTFYVYLSRHGARYP 59  
Db 27 SKSCDITVDLGQCSPATSHLMGQSPFFSLEDELVSXSKLPKCRITLVYVLSRHGARYP 86  
QY 60 TSSKSKRYKYSALIERIQKNAT-FKGYAFLEKTYNTLGGADLTPEGENOMVNSGKRYRY 118  
Db 87 TSSKSKRYKYLVAIQANATDFKGRFAFLKTYNTLGGADLTPEGQOVLNSGKRYRY 146  
QY 119 KALARNVPEVRASGSDRVYASAEKFTIEGQSAKLADP-AHQASPVINVIPEGSGYNN 176  
Db 147 KALARSVPPIRASGSDRVYASAEKFTIEGQSAKLADPAGATNNAAPAIIVIPESSTFNN 206  
QY 177 TLDHGLCTAFEDSTLGGDAEANTAVAPPIRARLEA-LPGVVLTEDEVDVNLMDKCPDT 235  
Db 207 TLDHGVTCKFEASQOLGDEVANANTALFAPDIRAKRHLPGVLTDEVDVSLMDKCSFDT 266  
QY 236 VARTSDATQSLSPCQDLFTADEW-QYDYLOSL-KYGYGAGNPLGPAGGVF-NELIARLT 292  
Db 267 VARTSDASQSLSPCQDLFTHEMKRYNYLQSLGKYGYGAGNPLGPAGGVF-NELIARLT 326  
QY 293 HSPVODHTSTNHTLDSNPATFPPLNATLYADFSHDNTMVSIFPALGLYNGTKPLSTSVES 352  
Db 327 RSPVODHTSTNHTLDSNPATFPPLNATLYADFSHDNTMVSIFPALGLYNGTKPLSTSVES 386  
QY 353 I-ETDGYASWTVPFARAYVEMOCEAGGEGEKEPELVYVNDRVVPLHGGCVKL 411  
Db 387 AKELDGYASWTVPFARAYVETMCKS-----EKEPLVRLINDRVYVPLHGGCVKL 439  
QY 412 GRCKLDVEEGLSFARSGGNMAECPA 437  
Db 440 GRCKLNDVFKGLSWARSGGNMGECS 465

RESULT 5  
US-08-868-435-12  
; Sequence 12, Application US/08868435  
; Patent No. 6291221  
; GENERAL INFORMATION:  
; APPLICANT: Van Loon, Adolphus  
; APPLICANT: Mitchell, David  
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY  
; NUMBER OF SEQUENCES: 35  
; CORRESPONDENCE ADDRESS:



QY 410 KLGRCKLDPVEGLSPFARSGGNMAECF 436  
Db 440 KLGRCRDAFVAGLSFAQAGNMADCF 466

RESULT 7  
US-07-923-724-8

; Sequence 8, Application US/07923724  
; Patent No. 5780292

## GENERAL INFORMATION:

; APPLICANT: Nevalainen, Helena K.M.  
; APPLICANT: Paloheimo, Marja T.  
; APPLICANT: Miettinen-Oinonen, Arja S.K.  
; APPLICANT: Torkkeli, Tuula K.  
; APPLICANT: Cantrell, Michael  
; APPLICANT: Piddington, Christopher S.  
; APPLICANT: Rambossek, John A.  
; APPLICANT: Turunen, Marja K.  
; APPLICANT: Fagerstr m, Richard B.  
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
; TITLE OF INVENTION: In Trichoderma  
; NUMBER OF SEQUENCES: 66  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
; STREET: 1100 New York Avenue, Suite 600  
; CITY: Washington  
; STATE: D.C.  
; COUNTRY: U.S.A.  
; ZIP: 20005

## COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: IBM PC compatible  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/923,724  
; FILING DATE: 31-JUL-1992  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/496,155  
; FILING DATE: 19-MAR-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/044,077  
; FILING DATE: 29-APR-1987  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: UK 8610600  
; FILING DATE: 30-APR-1986  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Cimbal, Michele A.  
; REGISTRATION NUMBER: 33,851  
; REFERENCE/DOCKET NUMBER: 1050.0240004  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (202) 371-2600  
; TELEFAX: (202) 371-2540  
; INFORMATION FOR SEQ ID NO: 8:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 467 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-07-923-724-8

Query Match 72.7%; Score 1688; DB 1; Length 467;  
Best Local Similarity 73.9%; Pred No. 3.3e-172;  
Matches 331; Conservative 40; Mismatches 59; Indels 18; Gaps 10;

QY 1 NSHSCDVT-DGQC-PEISHLMGQYSPFSLADESNISPDPVKGGRVTFVQVLSRHGARY 58  
Db 27 NSTCSDVT-DGQYCFSESHLMGQYAPFSLANESISPDPVAGGRVTFVQVLSRHGARY 86  
QY 59 PHSKSKYSALIEROKN-AIFKKGKIAFLKTYNTLLGADLTTPGEGNOMVNSGIKFRYR 117

Db 87 PTEKGRKYSALIEIOONTTDPDGKAFKTYNYSIGADLTTPFGQELVNSGIKFRYR 146  
QY 118 YKALARNIVPEVRASGSDRYASAEKFTBGFOSAKLADP---AHQASPVNTVITPBGSGY 174  
Db 147 YESLIRNIIPIRSGSSSRRIASGEKFTBGFOSAKLADPRAQPGQSSPKIDVVISASSS 206  
QY 175 NNTLDHGLCTAFEDSTLGDDAEANFTAVFAPPIRABLE-ALPGVNLDEEDVNLMDMCFE 233  
Db 207 NNTLDPGCTCFEEDSELADVEANFTATFAPSIQRLENLDSVTTLTDEVTYLMCMSE 266  
QY 234 DIVARTSDAQTQOLSEPCLETFADEN-QYDYQSL-KYGGAGAPLCPAOCVGF-NELIAR 290  
Db 267 DITSTVDTKLSFPCLETFHDEMIVHYDQSLKKYGGHAGNPLGPTQGVGYNELIAR 326  
QY 291 LTHSPVDHTSTNHTLSDNPAFPLNATYADFSHNTWVJEFALGYNKPLSTSTV 350  
Db 327 LTHSPVHDITSSNHTLSDNPAFPLNATYADFSHNTWVJEFALGYNKPLSTSTV 386  
QY 351 EST-ETDGYASTVTPPARAVYEMMQCEAGGGGEGEKEPLVRLVNDRVVPLHGCYD 409  
Db 387 ENTQDGFSSANTVPFASRLYEMMQCOA-----EQEPLVRLVNDRVVPLHGCYD 439  
QY 410 KLGRCKLDPVEGLSPFARSGGNMAECFA 437  
Db 440 ALGRCRDSFVRGLSPFARSGGNMAECFA 467

RESULT 8  
US-08-609-426A-8

; Sequence 8, Application US/08609426A  
; Patent No. 5830733

## GENERAL INFORMATION:

; APPLICANT: Nevalainen, Helena K.M.  
; APPLICANT: Paloheimo, Marja T.  
; APPLICANT: Miettinen-Oinonen, Arja S.K.  
; APPLICANT: Torkkeli, Tuula K.  
; APPLICANT: Cantrell, Michael  
; APPLICANT: Piddington, Christopher S.  
; APPLICANT: Rambossek, John A.  
; APPLICANT: Turunen, Marja K.  
; APPLICANT: Fagerstr m, Richard B.  
; APPLICANT: Houston, Christine S.  
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
; TITLE OF INVENTION: in Trichoderma  
; NUMBER OF SEQUENCES: 69  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
; STREET: 1100 New York Avenue, Suite 600  
; CITY: Washington  
; STATE: D.C.  
; COUNTRY: U.S.A.  
; ZIP: 20005

## COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: IBM PC compatible  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/609,426A  
; FILING DATE: 01-MAR-1996  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/923,724  
; FILING DATE: 31-JUL-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/496,155  
; FILING DATE: 19-MAR-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/044,077  
; FILING DATE: 29-APR-1987  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: UK 8610600

Query Match	72.7%;	Score 1688;	DB 2;	Length 467;
Best Local Similarity	73.9%;	Pred. No. 3,3e-172;		
Matches 331;	Conservative 40;	Mismatches 59;	Indels 18;	Gaps 10;

ADDRESS: SPERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER SYSTEM: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/374,652C  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07058  
FILING DATE: 27-JUL-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/925,401  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: REED, GRANT E.  
REGISTRATION NUMBER: 41,264  
REFERENCE/DOCKET NUMBER: 1050.071001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: not relevant  
MOLECULE TYPE: protein  
US-08-374-652C-2

Db 440 ALGCTRDSFVRGLSFARSGDMAECFA 467

## RESULT 10

US-08-151-574-32  
Sequence 32, Application US/08151574  
Patent No. 5436156

## GENERAL INFORMATION:

APPLICANT: Robert F.M. Van Gorpom

APPLICANT: Willem Van Hartingsveldt

APPLICANT: Petrus A. Van Paridon

APPLICANT: Annemarie E. Veensstra

APPLICANT: Rudolf G.M. Luitl

APPLICANT: Gerardus Sellen

TITLE OF INVENTION: Cloning and Expression of Microbial

NUMBER OF SEQUENCES: 52

CORRESPONDENCE ADDRESS:

ADDRESSEE: Morrison & Foerster

STREET: 345 Middlefield Road, Suite 200

CITY: Menlo Park

STATE: California

COUNTRY: USA

ZIP: 94025-3471

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

SOFTWARE:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/151,574

FILING DATE:

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/688,578

FILING DATE: 24-MAY-1991

ATTORNEY/AGENT INFORMATION:

NAME: Muraahige, Kate H.

REGISTRATION NUMBER: 29,959

REFERENCE/DOCKET NUMBER: 24615-20026.00

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-327-7250

INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:

LENGTH: 467 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-151-574-32

Query Match 72.6%; Score 1684; DB 1; Length 467;  
Best Local Similarity 73.9%; Pred. No. 8.9e-172;  
Matches 331; Conservative 40; Mismatches 59; Indels 18; Gaps 10;

QY 1 NSHSCPTVD-GYOC-PEISHLMGQYSPFSLADESAISDPVKGCRVTFVQVLSRHGARY 58  
Db 27 NQSSCDPTVDGYOCFSESHLMGQYAPFSLANESVISEPVGACRTFAQVLSRHGARY 86  
QY 59 PTSSSKKYSALIERIOKNA-TFKGKRAFLKTYNTYLGADDLTPFGENQMVNSGKIFPYRR 117  
Db 87 PTDSKSKKYSALIERIOKNAATTFDKYAFLLKTYNTYSLGADDLTPFGEGELVNSGKIFYOR 146  
QY 118 YKLANIVPEYVNASGSDRYASAEFTIGFOSAKIADP---AHQASPVINVIIEGSGY 174  
Db 147 YKSLTNIVPEYVNASGSDRYASAEFTIGFOSAKIADPRAOPGSSPRIDVIVISAPSS 206  
QY 175 NNTLDGCTAEDSTLGDADANFTAVFAPPIARLE-ALPGVNTDEDDVYNLMDKCF 233  
Db 207 NNTLDGCTAEDSTLGDADANFTAVFAPPIARLE-ALPGVNTDEDDVYNLMDKCF 266

QY 234 DTVARTDATQSLSPCDLFTADEN-QYDYLOSL-KYYGYAGNPLGPAQGVGF-NELIAR 290  
Db 267 DTISTSTVDTKLSPECDLFTHEDEWINYDYLQSLKKYGHGAGNPLGPTQGVGANELIAR 326  
QY 291 LTHSPVODHTSTNHTLDSNPATEPLNATLADPSHNTWYSIFPALGLNKGTPILSTSV 350  
Db 327 LTHSPVODHTSTNHTLDSNPATEPLNATLADPSHNTWYSIFPALGLNKGTPILSTTV 386  
QY 351 EST-ETDGYASWTVPFARAVYEMMQCEAGGGGEGEKEPELVRLVYNRVVPLHCGVD 409  
Db 387 ENITQDTGFSSAMTVPFARSLYEMMQCA-----EDPELVRLVYNRVVPLHCGPVD 439  
QY 410 KLGCKTLDPEVEGLSFARSGDMAECFA 437  
Db 440 ALGCTRDSFVRGLSFARSGDMAECFA 467

## RESULT 11

US-08-146-424-20  
Sequence 20, Application US/08146424  
Patent No. 5539963

## GENERAL INFORMATION:

APPLICANT: VAN OOIJEN, ALBERT J. J.

APPLICANT: RIETVELD, KRJUN

APPLICANT: HOEKREMA, ANDREAS

APPLICANT: PEN, JAN

APPLICANT: STIMONS, PETER C.

APPLICANT: VERWERD, TEUNIS C.

TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS

NUMBER OF SEQUENCES: 31

CORRESPONDENCE ADDRESS:

ADDRESSEE: MORRISON & FOERSTER

STREET: 755 Page Mill Road

CITY: Palo Alto

STATE: California

COUNTRY: USA

ZIP: 94304-1018

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

SOFTWARE:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/146,424

FILING DATE: 02-NOV-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: KENNEDY, BILL

REGISTRATION NUMBER: 33,407

REFERENCE/DOCKET NUMBER: 44615-20011.24

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 813-5600

TELEFAX: (415) 494-0792

INFORMATION FOR SEQ ID NO: 20:

SEQUENCE CHARACTERISTICS:

LENGTH: 467 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-146-424-20

Query Match 72.6%; Score 1684; DB 1; Length 467;  
Best Local Similarity 73.9%; Pred. No. 8.9e-172;  
Matches 331; Conservative 40; Mismatches 59; Indels 18; Gaps 10;

QY 1 NSHSCPTVD-GYOC-PEISHLMGQYSPFSLADESAISDPVKGCRVTFVQVLSRHGARY 58  
Db 27 NQSSCDPTVDGYOCFSESHLMGQYAPFSLANESVISEPVGACRTFAQVLSRHGARY 86  
QY 59 PTSSSKKYSALIERIOKNA-TFKGKRAFLKTYNTYLGADDLTPFGENQMVNSGKIFPYRR 117

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Db      87  PTDSKGGKYSALIEIQONATTFDGKYAFLEKTYNSLGADDLTPFGEOLVNSGIKEYOR 146
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      118 YKALARNIVEPVASGSDRVIAAEKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 174
      118 YKALARNIVEPVASGSDRVIAAEKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 174
Db      147 YESLTRNIVPEFIRSSGSSRVIASGKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 206
QY      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
Db      207 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 266
QY      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
Db      267 DTISTSTVDKLSPECLFTHEDEMINYDLOSLKTYGAGNPLGPAQGVF-NELIAR 326
QY      291 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 350
      291 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 350
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Db      327 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 386
QY      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
Db      387 ENTQDGFSSAWTVFPASRLYVEMQCOA-----EOEPLVYLVNDRVYPLHCGVD 439
QY      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
Db      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467
      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467
      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467

RESULT 12
US-08-693-709-2
; Sequence 2, Application US/08693709
; Patent No. 5770413
; GENERAL INFORMATION:
; APPLICANT: VAN COIJEN, ALBERT J.J.
; APPLICANT: RIETVELD, KRJUN
; APPLICANT: HOEKEMA, ANDREAS
; APPLICANT: PEN, JAN
; APPLICANT: SIMONS, PETER C.
; APPLICANT: VERWOERD, TEUNIS C.
; TITLE OF INVENTION: THE EXPRESSION OF PHYLASE
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: MORRISON & FOERSTER
; STREET: 755 PAGE MILL ROAD
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304-1018
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; OPERATING SYSTEM: DOS
; SOFTWARE: FASTSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/693,709
; FILING DATE: 07-AUG-1996
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/146,424
; FILING DATE: 02-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 24615-20011.10
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-813-5600
; TELEFAX: 415-494-0792
; TELEX: 706141
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; STRANDEDNESS: single

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; TOPOLOGY: linear
; MOLECULE TYPE: Protein
; FRAGMENT TYPE: Internal
; FEATURE:
; NAME/KEY: Signal Sequence
; LOCATION: 1...23
; OTHER INFORMATION:
US-08-693-709-2

Query Match      72.6%; Score 1684; DB 1; Length 467;
Best Local Similarity 73.9%; Pred. No. 8.9e-172;
Matches 331; Conservative 40; Mismatches 59; Indels 18; Gaps 10;

QY      1 NSHCDYVD-GYQC-PEISHLMGOVSPFSLADSSAISPDVPGKGVYVYLSRHGARY 58
      1 NSHCDYVD-GYQC-PEISHLMGOVSPFSLADSSAISPDVPGKGVYVYLSRHGARY 58
      1 NSHCDYVD-GYQC-PEISHLMGOVSPFSLADSSAISPDVPGKGVYVYLSRHGARY 58
Db      27 NOSCDYVDGYQCFSEYSHLMGOYAPFSLANESVISPEVPAGCRVYFAVLSRHGARY 86
QY      59 PTSSKSKKYSALIERIQRNA-TFKGKYAFLEKTYNTYLGADDLTPGENQVNSGIKEYOR 117
      59 PTSSKSKKYSALIERIQRNA-TFKGKYAFLEKTYNTYLGADDLTPGENQVNSGIKEYOR 117
      59 PTSSKSKKYSALIERIQRNA-TFKGKYAFLEKTYNTYLGADDLTPGENQVNSGIKEYOR 117
Db      87 PTDSKGGKYSALIEIQONATTFDGKYAFLEKTYNSLGADDLTPFGEOLVNSGIKEYOR 146
QY      118 YKALARNIVEPVASGSDRVIAAEKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 174
      118 YKALARNIVEPVASGSDRVIAAEKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 174
      118 YKALARNIVEPVASGSDRVIAAEKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 174
Db      147 YESLTRNIVPEFIRSSGSSRVIASGKFTIEGFOKSLADP---AHQASPVINVIPEGSGY 206
QY      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
      175 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 233
Db      207 NNTLDHGLCTAFEDSTLGDDEANFTAVFAPPIRABLE-ALPGVNLJDEDEVNLMDCPF 266
QY      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
      234 DTVARTSDATQSPFCDLFTADEN-QYDYQSL-KYGYGAGNPLGPAQGVF-NELIAR 290
Db      267 DTISTSTVDKLSPECLFTHEDEMINYDLOSLKTYGAGNPLGPAQGVF-NELIAR 326
QY      291 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 350
      291 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 350
      291 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 350
Db      327 LTHSPVODHTSTNHTLDSNPATPEPLNATLYADFSHNTWVSIFPALGLYNGKPLSTTSV 386
QY      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
      351 EST-ETDGYAASWTVPFAARAYVEMOCCEAGGGGEGEKEPELVYLVNDRVYPLHCGVD 409
Db      387 ENTQDGFSSAWTVFPASRLYVEMQCOA-----EOEPLVYLVNDRVYPLHCGVD 439
QY      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
      410 KLGRCKLDFEVEGLSFARSGDMAECFA 437
Db      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467
      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467
      440 ALGCRTRDSFVRGLSFARSGDMAECFA 467

RESULT 13
US-08-419-448-32
; Sequence 32, Application US/08419448
; Patent No. 5863533
; GENERAL INFORMATION:
; APPLICANT: Robert F.M. Van Gorcom
; APPLICANT: Willem Van Hartingsveldt
; APPLICANT: Petrus A. Van Paridon
; APPLICANT: Annemarie E. Veenstra
; APPLICANT: Rudolf G.M. Luttin
; TITLE OF INVENTION: Cloning and Expression of Microbial
; NUMBER OF SEQUENCES: 52
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Ave. N.W., Suite 5500
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25

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RESULT 14  
 US-08-819-825-3  
 ; Sequence 3, Application US/08819825  
 ; Patent No. 5866118  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Berka, Randy M.  
 ; APPLICANT: Ray, Michael W.  
 ; APPLICANT: Klotz, Alan V.  
 ; TITLE OF INVENTION: Polypeptides Having Phytase Activity  
 ; TITLE OF INVENTION: And Nucleic Acids Encoding Same  
 ; NUMBER OF SEQUENCES: 5  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: No. 58661180 No. 5866118disk of No. 5866118th America, Inc.  
 ; STREET: 405 Lexington Avenue, Suite 6400  
 ; CITY: New York  
 ; STATE: New York

RESULT 15  
 US-09-163-642-3  
 ; Sequence 3, Application US/09163642  
 ; Patent No. 6221644  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Berkta, Randy M.  
 ; APPLICANT: Ray, Michael W.  
 ; APPLICANT: Klitz, Alan V.  
 ; TITLE OF INVENTION: Polypeptides Having Phytase Activity

TITLE OF INVENTION: And Nucleic Acids Encoding Same

NUMBER OF SEQUENCES: 5

CORRESPONDENCE ADDRESS:

ADDRESSEE: No. 62216440 No. 6221644disk of No. 6221644th America, Inc.

STREET: 405 Lexington Avenue, Suite 6400

CITY: New York

STATE: New York

COUNTRY: U.S.A.

ZIP: 10174-6401

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/163,642

FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/819,825

FILING DATE: 18-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Lambitis, Elias J.

REGISTRATION NUMBER: 33,728

REFERENCE/DOCKET NUMBER: 4758.200-US

TELECOMMUNICATION INFORMATION:

TELEPHONE: 212 867 0123

TELEFAX: 212 867 0298

INFORMATION FOR SEQ. ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 467 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

US-09-163-642-3

Query Match 72.68; Score 1684; DB 4; Length 467;

Best Local Similarity 73.9%; Pred. No. 8.9e-172;

Matches 331; Conservative 40; Mismatches 59; Indels 18; Gaps 10;

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QY 1 NSHSDYVD-GYOC-PEISHLMGOYSPEFSIADESAISPDVPGKCRTEYOVLSRHGARY 58
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DB 27 NQSCDYVDQGGQCESETSHLMGOYAPFPLSANEVSISPEVPGACRTFPAQVLSRHGARY 86
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QY 59 PTSSKSKRYSAALIERIOKNA-TFKGKYAFKTYNTYTLGADLTPFGEMQVNSGIFRYR 117
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 87 PTDGSKKRYSAALIERIOKNA-TFKGKYAFKTYNTYTLGADLTPFGEMQVNSGIFRYR 146
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY 118 YKALARNIVPYRASGSRVYASAEKTEGFSQAKLADP---AHOASPVINVIIPGSGY 174
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 147 YESLTRNIVPFISSGSSRVYASAEKTEGFSQAKLADP---AHOASPVINVIIPGSGY 206
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY 175 NNTLHGICTAPEDSTLDDAEANFTAVFAPPIRABLE-ALPGVNLDEDEVNLMDCPF 233
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 207 NNTLHGICTAPEDSTLDDAEANFTAVFAPPIRABLE-ALPGVNLDEDEVNLMDCPF 266
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY 234 DTVARTSDATQULSPFCDLFTADEW-QYDYLOSL-KYGYGAGNPLGPAQGVGF-NELIAR 290
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DB 267 DTVARTSDATQULSPFCDLFTADEW-QYDYLOSL-KYGYGAGNPLGPAQGVGF-NELIAR 326
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QY 291 LTHSPVQDHTSNHNLDSNPATFPLNATLYADFSDHNTMVSIFPALGLYNGTKPLSTTSV 350
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DB 327 LTHSPVQDHTSNHNLDSNPATFPLNATLYADFSDHNTMVSIFPALGLYNGTKPLSTTSV 386
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QY 351 EST-ETDGYAASWTVPFAARAIVEMQCEAGGGGEGEKEPLVRYLVNDRVYPLHGGYVD 409
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DB 387 ENTQTDGFSASMTVPFAARIVEMQCEAGGGGEGEKEPLVRYLVNDRVYPLHGGYVD 439
  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY 410 KLGCKLDDFVEGLSFARSGGNMACEFA 437
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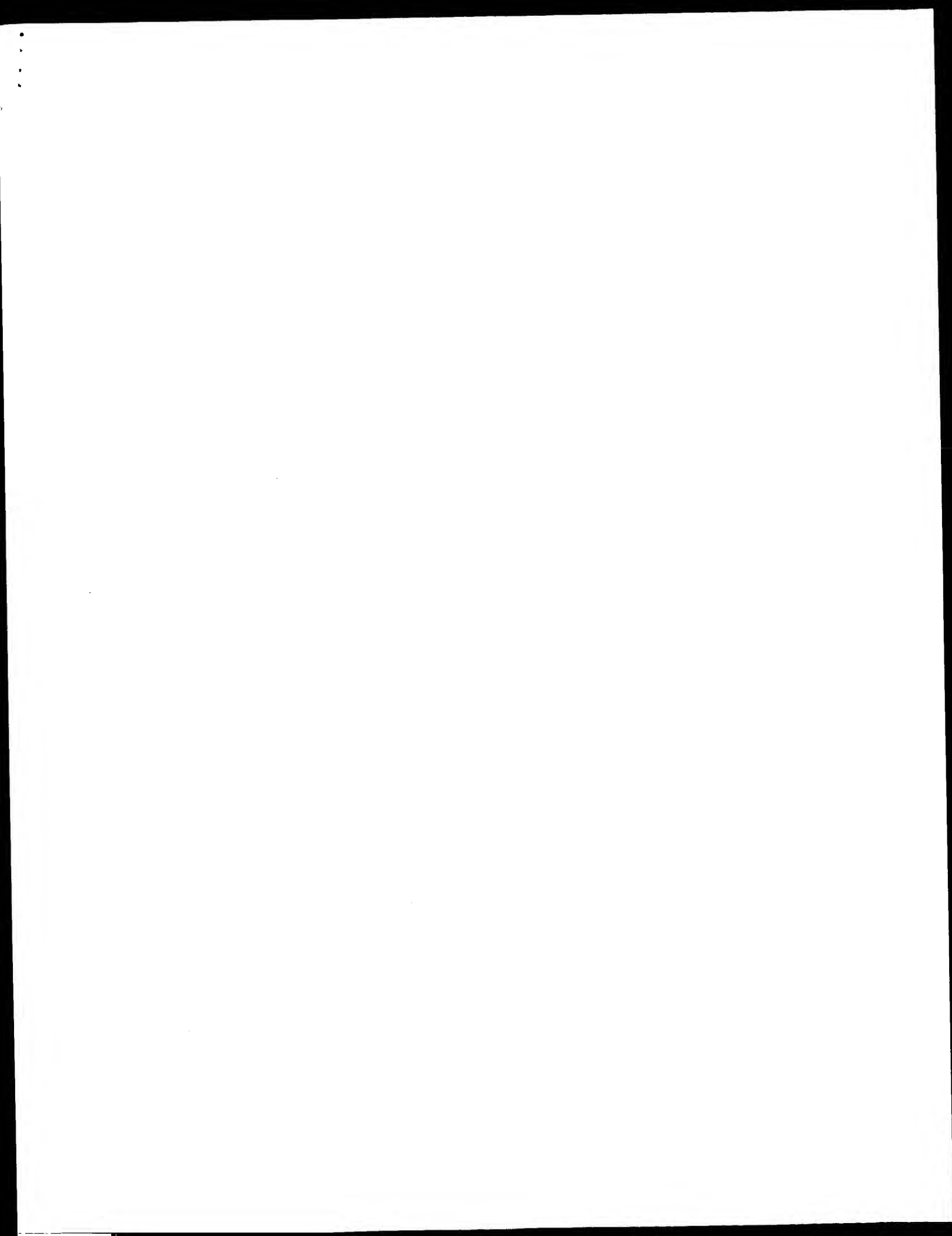
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Job time: 152 sec



Mon Jul 8 08:27:55 2002

us-09-488-265-27.ra1

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Date: Jul 3, 2002 2:38 PM

About: Results were produced by the GenCore software, version 4.5,  
Copyright (c) 1993-2000 Compugen Ltd.

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-YGAPEXT=0.500 -FGAPOP=6.000 -FGAPEXT=7.000 -YGAPEXT=10.000  
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-DEV\_TIMEOUT=120 -MARN\_TIMEOUT=30 -NO\_XLPXY -WAIT -THREADS=1

## Search information block:

Query: US-09-488-265-28  
Query length: 1404  
Database: Issued Patents.AA.\*  
Database sequences: 231628  
Search time (sec): 54.640000

## score\_list:

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/cgn2_6/ptodata/2/iaa/5b.COMB	pep:US-08-693-709-2	1875.00	3405.24	7,4e-183	467
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/cgn2_6/ptodata/2/iaa/5b.COMB	pep:US-08-744-231-33	1867.00	3390.63	4,8e-182	465
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; Patent No. 6153418
; GENERAL INFORMATION:
; APPLICANT: Lehmann, Martin
; TITLE OF INVENTION: Consensus Phylases
; FILE REFERENCE: consensus phylases 13239
; CURRENT APPLICATION NUMBER: US/09/121,425
; EARLIER FILING DATE: 1998-07-23
; EARLIER APPLICATION NUMBER: EPO 97112688.3
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 467
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; OTHER INFORMATION: Description of Artificial Sequence:consensus
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264 ySPProheGluThrValAlaArgThrSerAspAlaThrGluLeuSerPro 280
841 TTCTGTGCTTTGTCACCTCAGCAGCAATGATCGAATACGACTACTTCCA 890
281 PheCysAlaLeuPheThrHisAspGluThrArgGlnTyrAspTyrLeuG 297
891 AAGCTTGGGTAGTACTACGGTACGGTGTGCTGTAACCCATGGGTCAG 940
297 nSerLeuGlyLysTyrGlyTyrGlyAlaGlyAsnProLeuGlyPro 314
941 CTCAGGTTGGTGTGCTTGAACGAATGATGCTACATTGACTCAGCTCT 990
314 laGlnGlyValGlyPheAlaAsnGluLeuIleAlaArgLeuThrArgSer 330
991 CCACTTCAAGACCACTTCTACTAACACACTTGGACTCTAACCCAGC 1040
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364 eMetIleSerIlePhePheAlaLeuGlyLeuTyrAsnGlyThrAlaPro 380
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381 LeuSerThrThrSerValGlnSerIleGluGlyThrAspGlyTyrSerAl 397
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397 aSerTyrThrValProPheGlyAlaArgAlaTyrValGluMetMetGlnC 414
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seq\_name: /cgn2\_6/prodata/2/1aa/5A\_COMB.pep:us-07-923-724-8

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seq_documentation_block:
; Sequence 8, Application US/07923724
; Patent No. 5780292
; GENERAL INFORMATION:
; APPLICANT: Nevalainen, Helena K.M.
; APPLICANT: Palomelmo, Marja T.
; APPLICANT: Miettinen-Oinonen, Arja S.K.
; APPLICANT: Torkkeli, Tuula K.
; APPLICANT: Cantrell, Michael
; APPLICANT: Piddington, Christopher S.
; APPLICANT: Rambosek, John A.
; APPLICANT: Turunen, Marja K.
; APPLICANT: Fagerstr m, Richard B.
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes
; NUMBER OF SEQUENCES: 66
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
; STREET: 1100 New York Avenue, Suite 600
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentln Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/923,724
; FILING DATE: 31-Jul-1992
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/496,155
; FILING DATE: 19-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/044,077
; FILING DATE: 29-APR-1987
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 8610600
; ATTORNEY/AGENT INFORMATION:
; NAME: Cimbalala, Michele A.
; REGISTRATION NUMBER: 33,851
; REFERENCE/DOCKET NUMBER: 1050.0240004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 371-2600
; TELEFAX: (202) 371-2540
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-07-923-724-8

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alignment\_scores: Quality: 1879.00 Length: 467



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alignment_scores:      Quality: 1879.00      Length: 467
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alignment block:
US-09-488-265-28 x US-08-609-426A-8 ..

Align seg 1/1 to: US-08-609-426A-8 from: 1 to: 467

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1  MetGlyValSerAlaValIleuLeuProLeuIuTrIleuAlaGlyValThr  17
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51  ATCCGCGTACCGCGCTTGGGTCCTCGTGGTAAATCTCAGCTGTGGACATG  100
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34  AlaSerGlnGlyTrpGlnCysPheSerGluThrSerHisLeuTrpGlyGln  50
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151  TACTCTTCCTACTCTCTCTTGGCAGACGCAATCGTATTTGCCAGACGT  200
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51  TyAlaProPhePheSerIleuAlaAsnGlnSerAlaIleSerProAspVa  67
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201  TTCAGACGACGTGAGAGTTACTTTGCTTCCAAAGTTTGTCTGACACCGTG  250
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67  LProAlaGlyCysArgValThrPheAlaGlnValIleuSerArgHisIeGly  84
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351 GACTTACACACTACCTTTGGGTGGCGACAGCTACATCCATCGGTGAAA 400  
117 srhrtryanrlyrserleuglyAlalaspsnerthrproheilylug 134  
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134 lngluevalasnseryllyleusphenyrglnrgrlygluserleu 150  
451 GCTAAAGATGTTGTCATTCATTAAGACCTCTGTCTCAGACAGATTAT 500  
151 thrragyanllellepropheleatrgserserlyserAryall 167  
501 TGCTTCTGCTGAAAAATTCAATTGAAGGTTTCCATCGTAACCTGACG 550  
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551 ACCCGAGTTCACACACACACAGCTTCTCAGTTATTAAGTATCAT 600  
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601 CCAGAGCATCGGTTACACACACACTTGGACCGAGTACCTGTCTGCG 650  
201 serglualaserSerSerasnThrleuasprrglythrcysrhyva 217  
651 TTGGAGACCTCTGAATTAGAGTACGACGCTTGAAGCTTAACCTCAGCT 700  
217 lphglualspserylueuAlasprhrvalglualasnphehrAlat 234  
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234 hrphealaproserllearglgnlrgleuAlasnspsuaserlyal 250  
751 ACTTGGACTACGACAGACGCTGTTACTGTATGACATGTGTCAATTCGA 800  
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? TITLE OF INVENTION: Cloning and Expression of Microbial
? TITLE OF INVENTION: phytase
? NUMBER OF SEQUENCES: 32
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: Morrison & Foerster
? STREET: 545 Middlefield Road, Suite 200
? CITY: Menlo Park
? STATE: California
? COUNTRY: USA
? ZIP: 94025-3471
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? OPERATING SYSTEM: IBM PC compatible
? SOFTWARE: PC-DOS/MS-DOS
? PATENTIN RELEASE #1.0, Version #1.25
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/151,574
? FILING DATE:
? CLASSIFICATION: 435
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: 07/688,578
? FILING DATE: 24-MAY-1991
? ATTORNEY/AGENT INFORMATION:
? NAME: Murashige, Kate H.
? REGISTRATION NUMBER: 29,959
? REFERENCE/DOCKET NUMBER: 24615-20026_00
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: 415-327-7250
? INFORMATION FOR SEQ ID NO: 32:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 467 amino acids
? TYPE: amino acid
? TOPOLOGY: linear
? MOLECULE TYPE: protein
US-08-151-574-32

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    quality: 1875.00      Length: 467
    Ratio: 4.475          Gaps: 0
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alignment_block:
US-09-488-265-28 x US-08-151-574-32 ..

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seq\_name: /cgn2\_6/prodata/2/1aa/5h\_COMB.pep:us-08-146-424-20

seq\_documentation\_block:  
 ; Sequence 20, Application US/08146424  
 ; Patent No. 5593963

GENERAL INFORMATION:  
 APPLICANT: VAN OOLJEN, ALBERT J. J.

APPLICANT: RIETVELD, KRION  
 APPLICANT: HOEKEMA, ANDREAS

APPLICANT: PEN, JAN  
 APPLICANT: SIMONS, PETER C.

APPLICANT: VERWOERD, TEUNIS C.  
 TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS

NUMBER OF SEQUENCES: 31  
 CORRESPONDENCE ADDRESS:

ADDRESSEE: MORRISON & FOERSTER  
 STREET: 755 Page Mill Road

CITY: Palo Alto  
 STATE: California

COUNTRY: USA  
 ZIP: 94304-1018

COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.25  
 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/146,424  
 FILING DATE: 02-NOV-1993

CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:

NAME: KENNEDY, BILL  
 REGISTRATION NUMBER: 33,407

REFERENCE/DOCKET NUMBER: 44615-20011.24  
 TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 813-5600  
 TELEFAX: (415) 494-0792

TELEX: 706141  
 INFORMATION FOR SEQ. ID NO: 20:

SEQUENCE CHARACTERISTICS:  
 LENGTH: 467 amino acids

TYPE: amino acid  
 TOPOLOGY: linear

MOLECULE TYPE: protein  
 US-08-146-424-20

alignment\_scores:  
 Quality: 1875.00 Length: 467

Ratio: 4.475 Gaps: 0

Percent Similarity: 89.722 Percent Identity: 75.589

alignment\_block:  
 US-09-488-265-28 x US-08-146-424-20 ..

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401 ACCAAATGGTTAACTGTGATTAACTTACAGAGAATACAGAGGCTTG 450  
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451 ArgGlyLeuSerPheAlaArgSerGlyGlyAspThrAlaGlnCysPheAl 467
1401 T 1401
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seq_name:/cgn2_6/ptodata/2/1aa/5A_COMB.pep:US-08-693-709-2
seq_documentation_block:
? Sequence 2, Application US/08693709
? Patent No. 5770413
? GENERAL INFORMATION:
? APPLICANT: VAN OUIJEN, ALBERT J.J.
? APPLICANT: RIETVELD, KRISTIN
? APPLICANT: HOEKEMA, ANDREAS
? APPLICANT: PEN, JAN
? APPLICANT: SIMONS, PETER C.
? APPLICANT: VERMOERD, TEUNIS C.
? TITLE OF INVENTION: THE EXPRESSION OF PHYTASE
? TYPE OF INVENTION: IN PLANTS
? NUMBER OF SEQUENCES: 28
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: MORRISON & FOEMSTER
? STREET: 755 PAGE MILL ROAD
? CITY: Palo Alto
? STATE: CA
? COUNTRY: USA
? ZIP: 94304-1018
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Diskette
? COMPUTER: IBM Compatible
? OPERATING SYSTEM: DOS
? SOFTWARE: FASTSU for Windows Version 2.0
? CURRENT APPLICATION DATA:

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seq_documentation block:
; Sequence 32: Application US/08419448
; Patent No. 5863533
; GENERAL INFORMATION:
; APPLICANT: Robert F.M. Van Gorcom
; APPLICANT: Willem Van Hartingsveldt
; APPLICANT: Petrus A. Van Paridon
; APPLICANT: Annemarie E. Veenstra
; APPLICANT: Rudolf G.M. Luitlin
; APPLICANT: Gerardus Selten
; TITLE OF INVENTION: Cloning and Expression of Microbial
; TITLE OF INVENTION: Phylase
; NUMBER OF SEQUENCES: 52
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Ave. N.W., Suite 5500
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/419,448
; FILING DATE: 10-APR-1995
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H.
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 24615-20026.10
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-1500
; INFORMATION FOR SEQ ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-419-448-32

alignment_scores:
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      |||||  :::::  |||||  |||||  |||||  |||||
184  sProThrArgAlaGlnProGlyLysSerProLysIleAspValValIle 200
601  CCAGAGATCCGGTTTACACACACTTGGACCAAGCTTACTTATGCTG 650
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201  SerGluAlaSerSerSerAsnAsnThrLeuAspProGlyThrCysThr 217
651  TTTCGAAGCTCTGAATAGTGTGACGAGCTTGAAGCTTCACTCTG 700
      |||||  |||||  |||||  |||||  |||||  |||||
217  LpHeGlnAspSerGluLeuAlaAspThrValGlnAlaAsnPheThrAla 234
701  TGTTCGCTCCAGCTATTAGAGCTGATTGGAAGCTGCTCCAGGTT 750
      ||:::  ||:::  |||||  |||||  |||||  |||||
234  hrPheValProSerLleArgLnaArgLeuGluAsnAspLeuSerGlyVal 250
751  ACTTGTACTGACGAGAGAGCTTGTACTGTATGAGACATGTGTCCAT 800
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251  ThrLeuThrAspThrGlnValThrTyrLeuMetAspMetCysSerPheAs 267
801  CACTGCGCTAGACTTCTGACGCTACTGATGATGTCTCCCTGTGCTG 850
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951  TGGTTTGCCTAACGAATTTGATCTAGATGACTCACTCCAGCTCAAG 1000
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251 ThrLeuThrAspIhrGluValThrTyrlMetuMetuSerPheAs 267
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ADDRESS: No. 62216440 No. 62216440disk of No. 6221644th America, Inc.
STREET: 405 Lexington Avenue, Suite 6400
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/163,642
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/819,825
FILING DATE: 18-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 4758,200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 867 0123
TELEFAX: 212 867 0298
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
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151 ThrArgAsnIleValProPheIleArgSerSerGlySerSerArgValIle 167
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801 CACTGCGCTAGAACTCTGACGCTACTGTAATGTCTCCATCTGTGCTT 850
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301 LysTyrlTyrlGlnHisGlyAlaLysnProLeuGlyProIlnGlnGlyVa 317
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317 lGlyTyrlAlaAsnGluLeuIleAlaArgLeuThrHisSerProValHisA 334
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334 sPAspThrSerSerAsnHisThrLeuAspSerSerProAlaThrPhePro 350
1051 TTGAAGCTACTTTGAGCTGACTTCTCTACGACCAACACTATGATATC 1100
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467 a 467

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seq\_documentation\_block:

Sequence 32, Application US/09233510

Patent No. 6350602

GENERAL INFORMATION:

APPLICANT: Robert F.M. Van Gorcom

APPLICANT: Willem Van Hartingsveldt

APPLICANT: Petrus A. Van Paridon

APPLICANT: Annemarie E. Veenstra

APPLICANT: Rudolf G.M. Luitin

TITLE OF INVENTION: Cloning and Expression of Microbial

NUMBER OF SEQUENCES: 52

CORRESPONDENCE ADDRESS:

STREET: 545 Middlefield Road, Suite 200

CITY: Menlo Park

STATE: California

COUNTRY: USA

ZIP: 94025-3471

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

SOFTWARE:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/233, 510

CLASSIFICATION:

FILING DATE: 07/688, 578

PRIOR APPLICATION DATA:

ATTORNEY/AGENT INFORMATION:

NAME: Murashige, Kate H.

REGISTRATION NUMBER: 29, 959

REFERENCE/DOCKET NUMBER: 24615-20026, 00

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-327-2951

TELEFAX: 415-327-7250

INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:

LENGTH: 467 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-233-510-32

alignment\_scores:

Quality: 1875.00 Length: 467

Ratio: 4.475 Gaps: 0

Percent Similarity: 89.72 Percent Identity: 75.589

alignment\_block:

US-09-488-265-28 x US-09-233-510-32 ..



Align seg 1/1 to: US-09-233-510-32 from: 1 to: 467

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; Patent No. 6291221
; GENERAL INFORMATION:
; APPLICANT: Van Loon, Adolphus
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYLASE ACTIVITY
; NUMBER OF SEQUENCES: 35
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: United States of America
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/868,435
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; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/744,231
  
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; Sequence 33, Application US/08744231
; Patent No. 6358722
; GENERAL INFORMATION:
; APPLICANT: Van Loon, Adolphus
; APPLICANT: Mitchell, David
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY
; NUMBER OF SEQUENCES: 35
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: United States of America
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/744,231
; FILING DATE:
; CLASSIFICATION: 435
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; APPLICATION NUMBER: 08/424,757
; FILING DATE: 18-APR-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Kass, Alan P
; REGISTRATION NUMBER: 32142
; REFERENCE/DOCKET NUMBER: Case Docket 9339
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4205
; TELEFAX: (201) 235-2363
; INFORMATION FOR SEQ ID NO: 33:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 465 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
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; Patent No. 6139902
; GENERAL INFORMATION:
; APPLICANT: KONDO, Hidemasa
; APPLICANT: ANAZAWA, Hideharu
; APPLICANT: KANERO, Syunichi
; APPLICANT: NAGASHIMA, Tadashi
; APPLICANT: TANKE, Tatsuya
; TITLE OF INVENTION: NOVEL PHYTASE AND GENE ENCODING SAID PHYTASE
; FILE REFERENCE: 81356/124
; CURRENT APPLICATION NUMBER: US/09/155,855
; CURRENT FILING DATE: 1998-10-05
; EARLIER APPLICATION NUMBER: WO PCT/JP97/011175
; EARLIER FILING DATE: 1997-04-04
; EARLIER APPLICATION NUMBER: JP 084314
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 467
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Mon Jul 8 08:27:57 2002

us-09-488-265-28.n2p.ra1

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GenCore version 4.5  
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26	1794	72.9	466	4	US-08-744-231-12 Sequence 12, Appl1
27	1761	71.5	466	4	US-08-868-435-2 Sequence 2, Appl1

28	1761	71.5	466	4	US-08-744-231-2 Sequence 2, Appl1
29	1719	69.8	466	4	US-08-868-435-31 Sequence 31, Appl1
30	1719	69.8	466	4	US-08-744-231-31 Sequence 31, Appl1
31	1334	54.2	475	2	US-08-819-825-2 Sequence 2, Appl1
32	1334	54.2	475	4	US-09-163-642-2 Sequence 2, Appl1
33	1313.5	53.4	487	4	US-08-868-435-4 Sequence 4, Appl1
34	1313.5	53.4	487	4	US-08-744-231-4 Sequence 4, Appl1
35	802.5	32.6	443	3	US-08-993-359-30 Sequence 30, Appl1
36	798.5	32.4	439	3	US-08-993-359-24 Sequence 24, Appl1
37	798.5	32.4	439	3	US-09-221-654-2 Sequence 2, Appl1
38	798.5	32.4	439	3	US-08-989-358A-2 Sequence 2, Appl1
39	795.5	32.3	453	3	US-08-993-359-22 Sequence 22, Appl1
40	781	31.7	442	3	US-08-993-359-28 Sequence 28, Appl1
41	778	31.6	442	3	US-08-993-359-26 Sequence 26, Appl1
42	363	14.7	468	1	US-07-627-539G-2 Sequence 2, Appl1
43	358.5	14.6	446	1	US-07-627-539G-7 Sequence 7, Appl1
44	347.5	14.1	479	1	US-07-923-724-2 Sequence 2, Appl1
45	347.5	14.1	479	2	US-08-609-426A-2 Sequence 2, Appl1

## ALIGNMENTS

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RESULT 1
US-09-121-425-1
; Sequence 1, Application US/09121425
; Patent No. 6153418
; GENERAL INFORMATION:
; APPLICANT: Lehmann, Martin
; TITLE OF INVENTION: Consensus Phytases
; FILE REFERENCE: consensus phytases 13339
; CURRENT APPLICATION NUMBER: US/09/121,425
; CURRENT FILING DATE: 1998-07-23
; EARLIER APPLICATION NUMBER: EPO 97112688.3
; EARLIER FILING DATE: 1997-07-24
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 441
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:consensus
US-09-121-425-1
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Query Match 92.7%; Score 2282; DB 4; Length 441;  
Best Local Similarity 97.7%; Pred. No. 1.2e-230;  
Matches 431; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

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27 NSHSCDVPDGGYQCFEPISHLKMTYSPYFSLADESAISPPVDDCRVTFVQVLSRRGARY 86
1 NSHSCDVPDGGYQCFEPISHLKMTYSPYFSLADESAISPPVDDCRVTFVQVLSRRGARY 60
87 PTSSAKSAVSALLIEAIDKNAFAFGKAFKTYNTLTGADDLTPFENQMVNSGKIFERY 146
61 PTSSKSAVSALLIEAIDKNAFAFGKAFKTYNTLTGADDLTPFENQMVNSGKIFERY 120
147 YKLAARKIVTFIRASGSDRYIASAEKFIIEGFSQAKLADPGSQPHQASPVYINVTIPGSGY 206
121 YKLAARKIVTFIRASGSDRYIASAEKFIIEGFSQAKLADPGSQPHQASPVYINVTIPGSGY 180
207 NNTLDHGTCAFDSESDGDDVEANFTALPAPATRAFLTDLRGVTITDDEVDYITLDMCF 266
181 NNTLDHGTCAFDSESDGDDVEANFTALPAPATRAFLTDLRGVTITDDEVDYITLDMCF 240
267 DYVARTSDATELSPFCALETHDEMIDYVLOSIGKYYGAGNPILGPAGVGFANFLIAR 326
241 ETVARTSDATELSPFCALETHDEMIDYVLOSIGKYYGAGNPILGPAGVGFANFLIAR 300
327 LTHSPVODHSTHTLTDNSPATPFLNATLYADESHDNTWISIFPALGLYNGTKPLSTTSV 386
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Db 301 LFRSPVODHTSTNHTLDSNPATFPLNATLYADFSHNSMISIFALGLYNGTAPLSTTSV 360  
Qy 387 ESIEETDGSASWTVPFARAYVEMMOCAKEPLVRYLVNDVRYPLHGCAVDKGRCKR 446  
Db 361 ESIEETDGSASWTVPFARAYVEMMOCAKEPLVRYLVNDVRYPLHGCAVDKGRCKR 420  
Qy 447 DDFVEGLSFARSGGNWAECEFA 467  
Db 421 DDFVEGLSFARSGGNWAECEFA 441

RESULT 2  
US-09-121-425-2  
; Sequence 2, Application US/09121425  
; Patent No. 6153418  
; GENERAL INFORMATION:  
; APPLICANT: Lehmann, Martin  
; TITLE OF INVENTION: Consensus Phytases  
; FILE REFERENCE: Consensus Phytases 13239  
; CURRENT APPLICATION NUMBER: US/09/121,425  
; EARLIER FILING DATE: 1998-07-23  
; EARLIER APPLICATION NUMBER: EPO 97112688.3  
; NUMBER OF SEQ ID NOS: 20  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 2  
; LENGTH: 467  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:consensus  
; US-09-121-425-2

Query Match 92.2%; Score 2270; DB 4; Length 467;

Best Local Similarity 89.7%; Pred. No. 2,4e-229; Indels 40; Gaps 2;

Matches 43; Conservative 3; Mismatches 7; Indels 40; Gaps 2;

Qy 1 MGVFVLLSTATLFGSTGTALGPRGNSHSCDVTVDGYYOCFPEISHLWGTSPYFSLADE 60  
Db 1 MGVFVLLSTATLFGSTGTALGPRGNSHSCDVTVDGYYOCFPEISHLWGTSPYFSLADE 60  
Qy 61 SAISPDVDDCRVTEVOVLSRHGARYPTSSKRAYSA-----TYN 100  
Db 61 SAISPDVDDCRVTEVOVLSRHGARYPTSSKRAYSA-----TYN 100  
Qy 121 YTLGADLTPEGENOMNSGKIFRYRKALARKIVPEIRASGSDRVIASAEKFTIEGQSA 180  
Db 101 YTLGADLTPEGENOMNSGKIFRYRKALARKIVPEIRASGSDRVIASAEKFTIEGQSA 160  
Qy 181 KLADPGSQPHQASPVYN-----VIIPEGSGYNNNTLDHGTCTAFED 220  
Db 161 KLADPGSQPHQASPVYIDLIEAIQKNAPAEKGYAEFLKVIILPEGSGYNNNTLDHGTCTAFED 220  
Qy 221 SELGDVPEANTTALFAPAIRARLEADLPGLVLTDEDDVYILMDKCPFEVARTSDATELSP 280  
Db 221 SELGDVPEANTTALFAPAIRARLEADLPGLVLTDEDDVYILMDKCPFEVARTSDATELSP 280  
Qy 281 FCALFTHDHWIYDYLQSLGKYYGAGNPLGPAQGVGFANELLARLTRSPVODHTSTNH 340  
Db 281 FCALFTHDHWIYDYLQSLGKYYGAGNPLGPAQGVGFANELLARLTRSPVODHTSTNH 340  
Qy 341 TLDSPAPFPLNATLYADFSHNSMISIFALGLYNGTAPLSTTSVESIEETDGSASWT 400  
Db 341 TLDSPAPFPLNATLYADFSHNSMISIFALGLYNGTAPLSTTSVESIEETDGSASWT 400  
Qy 401 VPFARAYVEMMOCAKEPLVRYLVNDVRYPLHGCAVDKGRCKRDFVEGLSFARSGG 460  
Db 401 VPFARAYVEMMOCAKEPLVRYLVNDVRYPLHGCAVDKGRCKRDFVEGLSFARSGG 460  
Qy 461 NMWAECEFA 467  
Db 461 NMWAECEFA 467

Db 461 NMWAECEFA 467

RESULT 3  
US-07-923-724-8  
; Sequence 8, Application US/07923724  
; Patent No. 5780292  
; GENERAL INFORMATION:  
; APPLICANT: Nevalainen, Helena K.M.  
; APPLICANT: Paloheimo, Marja T.  
; APPLICANT: Miettinen-Oinonen, Arja S.K.  
; APPLICANT: Torkkeli, Tuula K.  
; APPLICANT: Cantrell, Michael  
; APPLICANT: Piddington, Christopher S.  
; APPLICANT: Rambosek, John A.  
; APPLICANT: Turunen, Marja K.  
; APPLICANT: Fagerström, Richard B.  
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
; NUMBER OF SEQUENCES: 66  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
; STREET: 1100 New York Avenue, Suite 600  
; CITY: Washington  
; STATE: D.C.  
; COUNTRY: U.S.A.  
; ZIP: 20005  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentln Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/923,724  
; FILING DATE: 31-Jul-1992  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/496,155  
; FILING DATE: 19-MAR-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/044,077  
; FILING DATE: 29-APR-1987  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: UK 8610600  
; FILING DATE: 30-APR-1986  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Cimballa, Michele A.  
; REGISTRATION NUMBER: 33,851  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (202) 371-2600  
; TELEFAX: (202) 371-2540  
; INFORMATION FOR SEQ ID NO: 8:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 467 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-07-923-724-8

Query Match 76.3%; Score 1879; DB 1; Length 467;

Best Local Similarity 75.6%; Pred. No. 2,4e-188; Indels 0; Gaps 0;

Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

Qy 1 MGVFVLLSTATLFGSTGTALGPRGNSHSCDVTVDGYYOCFPEISHLWGTSPYFSLADE 60  
Db 1 MGVSAILLLPLYLALAGTSLAVPASRNQSTCDVTVDGYYOCFSETSHLWGYAPFESLANE 60  
Qy 61 SAISPDVDDCRVTEVOVLSRHGARYPTSSKAYSALEAIQKNATKAYAFKLYTN 120  
Db 61 SAISPDVDDCRVTEVOVLSRHGARYPTSSKAYSALEAIQKNATKAYAFKLYTN 120



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?      REGISTRATION NUMBER: P-41,264
?      REFERENCE/DOCKET NUMBER: 1050.0080001
?      TELECOMMUNICATION INFORMATION:
?      TELEPHONE: (202) 371-2600
?      TELEFAX: (202) 371-2540
?      INFORMATION FOR SEQ ID NO: 8:
?      SEQUENCE CHARACTERISTICS:
?          LENGTH: 467 amino acids
?          TYPE: amino acid
?          TOPOLOGY: linear
?      MOLECULE TYPE: protein
US-08-609-426A-8

Query Match              76.3%; Score 1879; DB 2; Length 467;
Best Local Similarity    75.6%; Pred. No. 2,4e+18;
Matches   355; Conservative   41; Mismatches 73; Indels   0; Gaps   0;

QY      1 MGCFVLLSTATLFGSTGATAPGRNCHSHSCDVTVDGGYGQCPFEIHLMGVTSPEFLADE 60
        ||| ||| : | ||| : : |||| |||| | |||| |||:|||||:|
Db       1 MGVSAYVLLPYLLAGVTSGLAVPASHNGSTCDTVDQGQCSFSLHLMQGYAPFFSLANE 60

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## US-08-609-426A-8

RESULT 5  
 US-08-374-652C-2  
 : Sequence 2, Application US/08374652C  
 : Patent No. 5834286  
 :  
 : GENERAL INFORMATION:  
 :  
 : APPLICANT: NEVALAINEN, HELENA K. M.  
 : APPLICANT: PALOHETIMO, MARJA T.  
 : APPLICANT: FAGERSTROM, RICHARD B.  
 : APPLICANT: MIETTINEN-OINONEN, ARJA S.  
 : APPLICANT: TURUNEN, MARJA K.  
 : APPLICANT: RAMBOSEK, JOHN A.  
 : APPLICANT: PIDDINGTON, CHRISTOPHER S.  
 : APPLICANT: HOUSTON, CHRISTINE S.  
 : APPLICANT: CANTRELL, MICHAEL A.  
 : TITLE OF INVENTION: RECOMBINANT CELLS, DNA CONSTRUCTS,  
 : TITLE OF INVENTION: VECTORS AND METHODS FOR EXPRESSING,  
 : TITLE OF INVENTION: ENZYMES IN DESIRED RATIOS  
 :  
 : NUMBER OF SEQUENCES: 94  
 :  
 : CORRESPONDENCE ADDRESS:  
 : ADDRESSEE: STERNER, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
 : STREET: 1100 NEW YORK AVENUE, SUITE 600  
 : CITY: WASHINGTON

STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/374,652C  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07058  
FILING DATE: 27-JUL-1993  
CLASSIFICATION: 435  
APPLICATION NUMBER: US 07/925,401  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: REED, GRANT E.  
REGISTRATION NUMBER: 41,264  
REFERENCE/DOCKET NUMBER: 1050,071001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ. ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: not relevant  
MOLECULE TYPE: protein  
US-08-374-652C-2

Query Match 76.3%; Score 1879; DB 2; Length 467;  
Best Local Similarity 75.6%; Pred. No. 2,4e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGVSALLPLLLGVTSGLAIVPARNOSCTVDGQCFEISHMGTSYPSFLADE 60  
DB 1 MGVSALLPLLLGVTSGLAIVPARNOSCTVDGQCFEISHMGTSYPSFLADE 60  
QY 61 SAISPDVDDCRVTFYOVLSRHGARYPTSSASKAYSALIEAIOQNATFEKGYAFLEKTYN 120  
DB 61 SAISPDVDDCRVTFYOVLSRHGARYPTSSASKAYSALIEAIOQNATFEKGYAFLEKTYN 120  
QY 121 YTLGADLLTPFGENOMVNSGKIFRRYKALARKIVPFIIRASGSDRYIASAEKFTIEGFOA 180  
DB 121 YTLGADLLTPFGENOMVNSGKIFRRYKALARKIVPFIIRASGSDRYIASAEKFTIEGFOA 180  
QY 121 YSLGADLLTPFGELVNSGKIFRYEESTLIRNLIPIIRSSGSRVYASGEKFTIEGFOA 180  
DB 121 YSLGADLLTPFGELVNSGKIFRYEESTLIRNLIPIIRSSGSRVYASGEKFTIEGFOA 180  
QY 181 KLADPGSQPHASPVINVIIPESGYNNTLDGCTAFEDSELGDDVEANFTALFAPAIR 240  
DB 181 KLADPGSQPHASPVINVIIPESGYNNTLDGCTAFEDSELGDDVEANFTALFAPAIR 240  
QY 181 KLADPRAPGSSPKIDVYISEASSNNLDPGCTVFEDESLADYVEANFTATFAPSIR 240  
DB 181 KLADPRAPGSSPKIDVYISEASSNNLDPGCTVFEDESLADYVEANFTATFAPSIR 240  
QY 241 ARLEADLPGVTLTDEDEVVYIMDMCEPDVTARTSATELSPPCALFTHDEMTQYVYLOSIG 300  
DB 241 ARLEADLPGVTLTDEDEVVYIMDMCEPDVTARTSATELSPPCALFTHDEMTQYVYLOSIG 300  
QY 301 KYTGGAGNPLGPGAGVGFANELLARLTHSPVODHTSTNHLTDSNPATFPLNATLYADES 360  
DB 301 KYTGGAGNPLGPGAGVGFANELLARLTHSPVODHTSTNHLTDSNPATFPLNATLYADES 360  
QY 361 HNTMISIFFALGYNKRPILSTTSVESIEETDGYASASVTVPFAARAYVENMOCQAEKEP 420  
DB 361 HNTMISIFFALGYNKRPILSTTSVESIEETDGYASASVTVPFAARAYVENMOCQAEKEP 420  
QY 421 LVRVLVNDRVPLHGCAYDKLGRCKRDQFVEGLSFARSGGNWAEFEA 467  
DB 421 LVRVLVNDRVPLHGCAYDKLGRCKRDQFVEGLSFARSGGNWAEFEA 467

RESULT 6  
US-08-151-574-32  
Sequence 32, Application US/08151574  
Patent No. 5436156  
GENERAL INFORMATION:  
APPLICANT: Robert F. M. Van Gorcum  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon  
APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luttin  
TITLE OF INVENTION: Cloning and Expression of Microbial  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Moritson & Foerster  
STREET: 545 Middlefield Road, Suite 200  
CITY: Menlo Park  
STATE: California  
COUNTRY: USA  
ZIP: 94025-3471  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/151,574  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/688,578  
FILING DATE: 24-MAY-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.00  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-327-7250  
INFORMATION FOR SEQ. ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-151-574-32

Query Match 76.2%; Score 1875; DB 1; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6,3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGVSALLPLLLGVTSGLAIVPARNOSCTVDGQCFEISHMGTSYPSFLADE 60  
DB 1 MGVSALLPLLLGVTSGLAIVPARNOSCTVDGQCFEISHMGTSYPSFLADE 60  
QY 61 SAISPDVDDCRVTFYOVLSRHGARYPTSSASKAYSALIEAIOQNATFEKGYAFLEKTYN 120  
DB 61 SAISPDVDDCRVTFYOVLSRHGARYPTSSASKAYSALIEAIOQNATFEKGYAFLEKTYN 120  
QY 121 YTLGADLLTPFGENOMVNSGKIFRRYKALARKIVPFIIRASGSDRYIASAEKFTIEGFOA 180  
DB 121 YTLGADLLTPFGENOMVNSGKIFRRYKALARKIVPFIIRASGSDRYIASAEKFTIEGFOA 180  
QY 121 YSLGADLLTPFGELVNSGKIFRYEESTLIRNLIPIIRSSGSRVYASGEKFTIEGFOA 180  
DB 121 YSLGADLLTPFGELVNSGKIFRYEESTLIRNLIPIIRSSGSRVYASGEKFTIEGFOA 180  
QY 181 KLADPGSQPHASPVINVIIPESGYNNTLDGCTAFEDSELGDDVEANFTALFAPAIR 240  
DB 181 KLADPGSQPHASPVINVIIPESGYNNTLDGCTAFEDSELGDDVEANFTALFAPAIR 240  
QY 181 KLADPRAPGSSPKIDVYISEASSNNLDPGCTVFEDESLADYVEANFTATFAPSIR 240  
DB 181 KLADPRAPGSSPKIDVYISEASSNNLDPGCTVFEDESLADYVEANFTATFAPSIR 240  
QY 241 ARLEADLPGVTLTDEDEVVYIMDMCEPDVTARTSATELSPPCALFTHDEMTQYVYLOSIG 300  
DB 241 ARLEADLPGVTLTDEDEVVYIMDMCEPDVTARTSATELSPPCALFTHDEMTQYVYLOSIG 300

QY 301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADFS 360  
DB 301 KYYGAGNPLGPTQGVGYANELLARLTHSPYHDTSSNHTLDSNPATFPLNATLYADFS 360  
QY 361 HDNTMISIFPAGLYNGTKPLSTTSVESIEETDGYASMTVPFAARAYEMQCAKEP 420  
DB 361 HDNGIISILFALGLYNGTKPLSTTVENITQTDGSSAMTVPFASRLYEMQCAQDEP 420  
QY 421 LVRLVNDRVVPLHGCAPVDALGRCTROSFVRLGSLFARSGDMAECFA 467  
DB 421 LVRLVNDRVVPLHGCAPVDALGRCTROSFVRLGSLFARSGDMAECFA 467

RESULT 7  
US-08-146-424-20  
; Sequence 20, Application US/08146424  
; Patent No. 5593963  
; GENERAL INFORMATION:  
; APPLICANT: VAN COIJEN, ALBERT J. J.  
; APPLICANT: RIETVELD, KRIJN  
; APPLICANT: HOEKEMA, ANDREAS  
; APPLICANT: PEN, JAN  
; APPLICANT: SIMONS, PETER C.  
; APPLICANT: VERWOERD, TEUNIS C.  
; TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS  
; NUMBER OF SEQUENCES: 31  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: MORRISON & FOERSTER  
; STREET: 755 Page Mill Road  
; CITY: Palo Alto  
; STATE: California  
; COUNTRY: USA  
; ZIP: 94304-1018  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/146,424  
; FILING DATE: 02-NOV-1993  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: KENNEDY, BILL  
; REGISTRATION NUMBER: 33,407  
; REFERENCE/DOCKET NUMBER: 44615-20011.24  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (415) 813-5600  
; TELEFAX: (415) 494-0792  
; TELEX: 706141  
; INFORMATION FOR SEQ ID NO: 20:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 467 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-08-146-424-20

Query Match 76.2%; Score 1875; DB 1; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6.3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGCVYVLSIALIFGSGTALGPRGNHSCDPTVDGQYQCFPEISHLWGTSPYSLADE 60  
DB 1 MGCVSAVLPLFLYLSGTVSLGAVPASRNOSCDTVDGQCFSESHMGQVAFPSLANE 60  
QY 61 SAISPDPDCVTFYOVYVSRHGARYPTSSASKASALIEALOKAAVAFKGYAFLKTYN 120  
DB 61 SVTISBPVPGCVITRAQVYLSRHGARYPTDSKGRKYSALIEEIOQNATFEDGKVAFLKTYN 120  
QY 121 YVIGADDLTFPGENQMVNSGIFKFRYKALARKIVPFRASGSDRVIASAKFIEGPOSA 180

DB 121 YVIGADDLTFPGEOELVNSGIFKFRYKALARKIVPFRASGSDRVIASAKFIEGPOST 180  
QY 181 KLADPGSPQASPVINIVITPESSGYNNTLDHCTCAFDESELDGYEAMFTALFAPAIR 240  
DB 181 KLADPRAQPOSSPKIDVYVSEASSNNITLDPCTCVFDESELDADVEANFTATFAPSTR 240  
QY 241 ARLEADPLGVTLNDEBVVYLMDCPPDVARTSDATELSFPCALFTHDEMIOYDVLQSIG 300  
DB 241 ORLENDLSGVTLNDEVTYLMDCSPDTISTSTVDKILSPFCDLTFHDEMIOYDVLQSIG 300  
QY 301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADFS 360  
DB 301 KYYGAGNPLGPTQGVGYANELLARLTHSPYHDTSSNHTLDSNPATFPLNATLYADFS 360  
QY 361 HDNTMISIFPAGLYNGTKPLSTTSVESIEETDGYASMTVPFAARAYEMQCAKEP 420  
DB 361 HDNGIISILFALGLYNGTKPLSTTVENITQTDGSSAMTVPFASRLYEMQCAQDEP 420  
QY 421 LVRLVNDRVVPLHGCAPVDALGRCTROSFVRLGSLFARSGDMAECFA 467  
DB 421 LVRLVNDRVVPLHGCAPVDALGRCTROSFVRLGSLFARSGDMAECFA 467

RESULT 8  
US-08-693-709-2  
; Sequence 2, Application US/08693709  
; Patent No. 5770413  
; GENERAL INFORMATION:  
; APPLICANT: VAN COIJEN, ALBERT J. J.  
; APPLICANT: RIETVELD, KRIJN  
; APPLICANT: HOEKEMA, ANDREAS  
; APPLICANT: PEN, JAN  
; APPLICANT: SIMONS, PETER C.  
; APPLICANT: VERWOERD, TEUNIS C.  
; TITLE OF INVENTION: THE EXPRESSION OF PHYTASE  
; NUMBER OF SEQUENCES: 28  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: MORRISON & FOERSTER  
; STREET: 755 PAGE MILL ROAD  
; CITY: Palo Alto  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 94304-1018  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq for Windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/693,709  
; FILING DATE: 07-AUG-1996  
; CLASSIFICATION: 800  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/146,424  
; FILING DATE: 02-NOV-1993  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Murashige, Kate H  
; REGISTRATION NUMBER: 29,959  
; REFERENCE/DOCKET NUMBER: 24615-20011.10  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 415-813-5600  
; TELEFAX: 415-494-0792  
; TELEX: 706141  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 467 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: Internal

FEATURE:  
NAME/KEY: Signal Sequence  
LOCATION: 1..23  
OTHER INFORMATION:  
US-08-693-709-2

Query Match 76.2%; Score 1875; DB 1; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6.3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGVEFVLLSIATLFGSTGSLALGPRGNSHSCDVTGQCFPEISHLMGTSYFSLADE 60  
1 MGVSAYLLPLYLISGVTSLAVPASRNOSSCDVTGQCFSESHLMQYAFPSLANE 60  
QY 61 SATSPDVPDCCRVTFVYVLSRHGARYPTSSASKAYSALIAIONKATFAFKYAFKTYN 120  
61 SVISPEVPAGCVRVFAQVLSRHGARYPTDSKGGKYSALIEIOQNMATTFDGKAFKTYN 120  
DB 121 YTLGADLTPFGENQMVNSGIFRYRYKALARKIYPIFIRASGSDRYIASAKETIEGQSA 180  
121 YSLADLTPFGEQELVNSGIFRYRESLRLNIVPIRSGSSRYIASGKKEIEGFQST 180  
QY 181 KLADPGSOPHOASPVYINVIPEGSGYNTLDHGTCTAFEDSELGDDVEANFTALFAPAIR 240  
181 KLKDPRAOPGQSSPKRIDVYISASSNNLDPGCTVFEEDSELADYVEANFTAFVPSIR 240  
DB 241 ARLEADLPVTLTDEDVYVYLMDCPFDVTARTSDATELSPFALTFHDEMIOYDLOSLG 300  
241 QRLNDLSGVTLTDEVTYVYLMDCSPFDISTSTVDTKLSPCDLTFHDEMIVYDLOSLK 300  
QY 301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADS 360  
301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADS 360  
DB 361 HDNTMISIFPALGLYNGTKPLSTTSVESIEETDGSASWTVPFARAYVEMMOQAQKEP 420  
361 HDNGIISILFALGLYNGTKPLSTTTVENITQTDGFSAMWTVPFASRLYVEMMOQAQKEP 420  
QY 421 LVRLVNDRVVPLHGCAYDKLGRCKRDPFVGLSFARSGGMAECFA 467  
421 LVRLVNDRVVPLHGCAYDKLGRCKRDPFVGLSFARSGGMAECFA 467  
DB

RESULT 9  
US-08-419-448-32  
Sequence 32, Application US/08419448  
Patent No. 5863533  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon  
APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luitl  
APPLICANT: Gerardus Selten  
TITLE OF INVENTION: Cloning and Expression of Microbial  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Morrison & Foerster  
STREET: 2000 Pennsylvania Ave. N.W., Suite 5500  
CITY: Washington  
STATE: D.C.  
COUNTRY: USA  
ZIP: 20006-1888  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/419,448

FILING DATE: 10-Apr-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.10  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-887-1500  
INFORMATION FOR SEQ ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-419-448-32

Query Match 76.2%; Score 1875; DB 2; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6.3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGVEFVLLSIATLFGSTGSLALGPRGNSHSCDVTGQCFPEISHLMGTSYFSLADE 60  
1 MGVSAYLLPLYLISGVTSLAVPASRNOSSCDVTGQCFSESHLMQYAFPSLANE 60  
DB 61 SATSPDVPDCCRVTFVYVLSRHGARYPTSSASKAYSALIAIONKATFAFKYAFKTYN 120  
61 SVISPEVPAGCVRVFAQVLSRHGARYPTDSKGGKYSALIEIOQNMATTFDGKAFKTYN 120  
QY 121 YTLGADLTPFGENQMVNSGIFRYRYKALARKIYPIFIRASGSDRYIASAKETIEGQSA 180  
121 YSLADLTPFGEQELVNSGIFRYRESLRLNIVPIRSGSSRYIASGKKEIEGFQST 180  
DB 181 KLADPGSOPHOASPVYINVIPEGSGYNTLDHGTCTAFEDSELGDDVEANFTALFAPAIR 240  
181 KLKDPRAOPGQSSPKRIDVYISASSNNLDPGCTVFEEDSELADYVEANFTAFVPSIR 240  
QY 241 ARLEADLPVTLTDEDVYVYLMDCPFDVTARTSDATELSPFALTFHDEMIOYDLOSLG 300  
241 QRLNDLSGVTLTDEVTYVYLMDCSPFDISTSTVDTKLSPCDLTFHDEMIVYDLOSLK 300  
DB 301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADS 360  
301 KYYGAGNPLGPAQGVGFANELLARLTHSPYODHTSTNHTLDSNPATFPLNATLYADS 360  
QY 361 HDNTMISIFPALGLYNGTKPLSTTSVESIEETDGSASWTVPFARAYVEMMOQAQKEP 420  
361 HDNGIISILFALGLYNGTKPLSTTTVENITQTDGFSAMWTVPFASRLYVEMMOQAQKEP 420  
QY 421 LVRLVNDRVVPLHGCAYDKLGRCKRDPFVGLSFARSGGMAECFA 467  
421 LVRLVNDRVVPLHGCAYDKLGRCKRDPFVGLSFARSGGMAECFA 467  
DB

RESULT 10  
US-08-819-825-3  
Sequence 3, Application US/08819825  
Patent No. 5866118  
GENERAL INFORMATION:  
APPLICANT: Berka, Randy M.  
APPLICANT: Ray, Michael W.  
APPLICANT: Klotz, Alan V.  
TITLE OF INVENTION: Polypeptides Having Phytase Activity  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 58661180 No. 5866118disk of No. 5866118ch America, Inc.  
STREET: 405 Lexington Avenue, Suite 6400  
CITY: New York  
STATE: New York  
COUNTRY: U.S.A.  
ZIP: 10174-6401  
COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,825  
FILING DATE: 18-MAR-1997  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lambiris, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4758.200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212 867 0123  
TELEFAX: 212 867 0298  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
US-08-819-825-3

Query Match 76.2%; Score 1875; DB 2; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6, 3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGCVVLLSLATLFGSTGALGPRGNHSCDVTGQYOCFPEISHLMGYSYFSLADE 60  
DB 1 MGSAVALLPLYLGLSGVSLAVPASRNOSCDTVQGYOCFSETSHLMQYAFPSLANE 60  
QY 61 SAISPDPDDCARTFVQVLSRHGARYPTSSAKASAYSALIEAIOKNATFAFGKATLKTYN 120  
DB 61 SVISPEVPAGCARTFAQVLSRHGARYPTDSKGGKYSALIEEIOKNATTFEDGKATLKTYN 120  
QY 121 YTLGADDLTPFGENQWNSGKIFRYRKLARKIYPTIRASGSDRYIASAEKFIQFQSA 180  
DB 121 YSLGADDLTPFGEQELVNSGKIFQRYESLIRNIYPTIRSSGSSRYIASGKKFIEGFQST 180  
QY 181 KLADGSGPHQASPVINVIIPESGYNNTLDHGTCTAFEDSELGDDVEANFTALFAPAIR 240  
DB 181 KKLDPRAQPGQSSPKIDVVISSEASSNNITLDPGCTCFEDELADTVEANFTALFAPAIR 240  
QY 241 ARLEADLPGVTLTDEVDVYILMDKCPEDTVARTSDATELSPFCALFTHDEMIQYDLOSIG 300  
DB 241 QLENDLGSVTLTDEVTYILMDKCFDTITSTYDTKLSPCDLFTHDEMINYDLOSIG 300  
QY 301 KYTGAGNPLGPAQGVGFANELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADES 360  
DB 301 KYTGAGNPLGPTQGVGFANELIARLTHSPVHDTSSNHTLDSNPATFPLNATLYADES 360  
QY 361 HDNMTISIFPALGLYNGTRPLSTTVESEIETDGYASATVPFAARAYEMMOCAEKEP 420  
DB 361 HDNGIISILFALGLYNGTRPLSTTVEENITQTDGSSAMTVPFASRLIYEMMOCAEKEP 420  
QY 421 LVRLVNDVRVPLHGCAYDKLGRCKRDEFEGLSPARSGGMAECFA 467  
DB 421 LVRLVNDVRVPLHGCAYDKLGRCKRDSFVRGLSPARSGGMAECFA 467

RESULT 11  
US-09-163-642-3  
Sequence 3, Application US/09163642  
Patent No. 6221644  
GENERAL INFORMATION:  
APPLICANT: Berk, Randy M.  
APPLICANT: Klotz, Alan V.  
TITLE OF INVENTION: Polypeptides Having Phytase Activity  
TITLE OF INVENTION: And Nucleic Acids Encoding Same  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:

ADDRESSEE: No. 62216440 No. 6221644disk of No. 6221644th America, Inc.  
STREET: 405 Lexington Avenue, Suite 6400  
CITY: New York  
STATE: New York  
COUNTRY: U.S.A.  
ZIP: 10174-6401  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/163,642  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,825  
FILING DATE: 18-MAR-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: Lambiris, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4758.200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212 867 0123  
TELEFAX: 212 867 0298  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
US-09-163-642-3

Query Match 76.2%; Score 1875; DB 4; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6, 3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGCVVLLSLATLFGSTGALGPRGNHSCDVTGQYOCFPEISHLMGYSYFSLADE 60  
DB 1 MGSAVALLPLYLGLSGVSLAVPASRNOSCDTVQGYOCFSETSHLMQYAFPSLANE 60  
QY 61 SAISPDPDDCARTFVQVLSRHGARYPTSSAKASAYSALIEAIOKNATFAFGKATLKTYN 120  
DB 61 SVISPEVPAGCARTFAQVLSRHGARYPTDSKGGKYSALIEEIOKNATTFEDGKATLKTYN 120  
QY 121 YTLGADDLTPFGENQWNSGKIFRYRKLARKIYPTIRASGSDRYIASAEKFIQFQSA 180  
DB 121 YSLGADDLTPFGEQELVNSGKIFQRYESLIRNIYPTIRSSGSSRYIASGKKFIEGFQST 180  
QY 181 KLADGSGPHQASPVINVIIPESGYNNTLDHGTCTAFEDSELGDDVEANFTALFAPAIR 240  
DB 181 KKLDPRAQPGQSSPKIDVVISSEASSNNITLDPGCTCFEDELADTVEANFTALFAPAIR 240  
QY 241 ARLEADLPGVTLTDEVDVYILMDKCPEDTVARTSDATELSPFCALFTHDEMIQYDLOSIG 300  
DB 241 QLENDLGSVTLTDEVTYILMDKCFDTITSTYDTKLSPCDLFTHDEMINYDLOSIG 300  
QY 301 KYTGAGNPLGPAQGVGFANELIARLTHSPVODHTSTNHTLDSNPATFPLNATLYADES 360  
DB 301 KYTGAGNPLGPTQGVGFANELIARLTHSPVHDTSSNHTLDSNPATFPLNATLYADES 360  
QY 361 HDNMTISIFPALGLYNGTRPLSTTVESEIETDGYASATVPFAARAYEMMOCAEKEP 420  
DB 361 HDNGIISILFALGLYNGTRPLSTTVEENITQTDGSSAMTVPFASRLIYEMMOCAEKEP 420  
QY 421 LVRLVNDVRVPLHGCAYDKLGRCKRDEFEGLSPARSGGMAECFA 467  
DB 421 LVRLVNDVRVPLHGCAYDKLGRCKRDSFVRGLSPARSGGMAECFA 467

RESULT 12  
US-09-233-510-32

Sequence 32, Application US/09233510  
Patent No. 6350602  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Faridon  
APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luttin  
APPLICANT: Gerardus Seltien  
TITLE OF INVENTION: Cloning and Expression of Microbial  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Morrison & Foerster  
STREET: 545 Middlefield Road, Suite 200  
CITY: Menlo Park  
STATE: California  
COUNTRY: USA  
ZIP: 94025-3471  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/233,510  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/688,578  
FILING DATE: 24-MAY-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.00  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-327-7250  
TELEFAX: 415-327-2951  
INFORMATION FOR SEQ ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-233-510-32

Query Match 76.2%; Score 1875; DB 4; Length 467;  
Best Local Similarity 75.6%; Pred. No. 6.3e-188;  
Matches 353; Conservative 41; Mismatches 73; Indels 0; Gaps 0;

QY 1 MGVFVYLSTLTFGSTGSLALGRGNHSDTDVGGYOCPELTHMGTYSPFSLADE 60  
DB 1 MGVSAVLLPLKLLSGVSLGAVPASRNQSSCDIVDQGCSETSLHMGQYAPFSLANE 60  
QY 61 SAISPDVDDCVTFEVQYLISHRGARYPTSSASKAYSALEIAIQNATAFKGAYFLKTYN 120  
DB 61 SVISEVYAGCRVTFAYQYLSHRGARYPTDSKGYSALEIEIQNATFPDGKAYFLKTYN 120  
QY 121 YTLGADLTTPFGENOMVNSGKIFRRKAKALARKIYVPRAGSDRYVLAASAKFLIEGFOA 180  
DB 121 YSLGADLTTPFGEQELVNSGKIFQRYESLTRNIVPFRSSGSSRVLAASGKFLIEGFOST 180  
QY 181 KIADGSGPHQASPVYINIIPEGSGYNTLPHGCTAFEDSELDDVYEANFTALFAPAIR 240  
DB 181 KIKDPRAGGSSPKIDIVVISASSNNITDPGCTVFEDELADTVANFTAFVSIR 240  
QY 241 ARLEADLPVTLTDEDDVYLLMDMCPFDIVARTSATLSPCALFTHDEWIQYDLOSIG 300  
DB 241 QRLNDLSGVTLTDEEVYLLMDMCSFDISTSTVDTKLSPCDLFTHDEWYNYDYLOSLK 300  
QY 301 KTYGAGNPLGPAQGVGFANELLARLHSPQDHTINHLDSNPAFPLNATLYADFS 360

DB 301 KTYGAGNPLGPAQGVGFANELLARLHSPVHDDRSSNHTLDDSPATPPLNSTLYADFS 360  
QY 361 HDNMTSIFPALGIYNGTRPLSTSVESIEEDGYSASWTVPAAAYVEMQCOAEXEP 420  
DB 361 HDNMTSIFPALGIYNGTRPLSTSVENIQTDGESSAWTVPPASRLVYEMQCOAEXEP 420  
QY 421 LVRLVNDRVVPLHGCYVDKLRGRCDRDFEGLSFPARSGDMAECPA 467  
DB 421 LVRLVNDRVVPLHGCYVDALGRCTRDSFYRGLSFPARSGDMAECPA 467

RESULT 13  
US-08-668-435-33  
Sequence 33, Application US/08668435  
Patent No. 6291221  
GENERAL INFORMATION:  
APPLICANT: Van Loon, Adolphus  
APPLICANT: Mitchell, David  
TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY  
NUMBER OF SEQUENCES: 35  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Hoffmann-La Roche Inc.  
STREET: 340 Kingsland Street  
CITY: Nutley  
STATE: New Jersey  
COUNTRY: United States of America  
ZIP: 07110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/668,435  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/744,231  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Kass, Alan P  
REGISTRATION NUMBER: 32142  
REFERENCE/DOCKET NUMBER: Case Docket 9339  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 235-4205  
TELEFAX: (201) 235-2363  
INFORMATION FOR SEQ ID NO: 33:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 465 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 104  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 119  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 205  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 228  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 337  
OTHER INFORMATION: /note="potential N-glycosylation site"

FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 374  
OTHER INFORMATION: /note="potential N-glycosylation site"  
US-08-868-435-33

Query Match 75.8%; Score 1867; DB 4; Length 465;  
Best Local Similarity 76.0%; Pred. No. 4.3e-187;  
Matches 355; Conservative 36; Mismatches 74; Indels 2; Gaps 2;

QY 1 MGVEVLLSTITLFGSISGTLGPRGNSHSCDVTYDGGYQCPPELSHLMGYSPFSLADE 60  
DB 1 MVTTLFLSLAAYLLSGRVSAPSSAG-SKSCDVTYDGGYQCPPELSHLMGYSPFSLADE 59  
QY 61 SAISPDVDDCRVTEFVYVLSRHGARYPTSSASKAYSALEIAQKNAFAFGKAFLEKTYN 120  
DB 60 LVSASKLPKDCRITLYOVLSHRGARYPTSSASKAYKRLVLAIQANADDFGKFAFLKTYN 119  
QY 121 YTLGADLTTPGENOMVNSGKIFRYRALKARKVTPPIRASGSDRVIASAEKIEGFQSA 180  
DB 120 YTLGADLTTPGEQOLVNSGKIFQRYKALARSVPPIRASGSDRVIASAEKIEGFQSA 179  
QY 181 KLADPGSPHQPASPVINVIIPESGYNNTLDHGCTAFEDSEIGDDVEANFTALFAPAIR 240  
DB 180 KLADPGA-TNKAAPALISVITPESETFNNTLDHGCTAFEDSEIGDDVEANFTALFAPDIR 238  
QY 241 ARLEADLPVTLDEDEVYVYIMDCPEPTVARTSDATELSPFCALETHDEMIOYDYLOSIG 300  
DB 239 ARAEKHLPGVTLDEDEVYVYIMDCSPFVARTSDASQLSFQCLFTHNEKKKYNVLOSIG 298  
QY 301 KYGYGAGNPLGPAQGVGFANELIARLTHSPVODHTSTNHTLDSNPATPLNATMYVDS 360  
DB 299 KYGYGAGNPLGPAQGVGFANELIARLTHSPVODHTSTNHTLDSNPATPLNATMYVDS 358  
QY 361 HDNMTSIFPALGLYNGTKPLSTSVESIEETDGYASWVPPARAAYEMMOCKAEKPE 420  
DB 359 HDNMTSIFPALGLYNGTKPLSTSVESIAKELDGYASWVPPARAAYEMMOCKAEKPE 418  
QY 421 LVRVLVNDVRVPLHGCAYDKLGRCKRDDVEEGLSFARSGGNAECFA 467  
DB 419 LVRVLVNDVRVPLHGCAYDKLGRCKRLNDFVKGLSMARSGGNGECRS 465

RESULT 14  
US-08-744-231-33  
Sequence 33, Application US/08744231  
Patent No. 6358722  
GENERAL INFORMATION:  
APPLICANT: Van Loon, Adolphus  
APPLICANT: Mitchell, David  
TITLE OF INVENTION: POLYPEPTIDES WITH PHYLASE ACTIVITY  
NUMBER OF SEQUENCES: 35  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Hoffmann-La Roche Inc.  
CITY: Nutley  
STATE: New Jersey  
COUNTRY: United States of America  
ZIP: 07110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/744.231  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/424,757  
FILING DATE: 18-APR-1995  
ATTORNEY/AGENT INFORMATION:

NAME: Kass, Alan P  
REGISTRATION NUMBER: 32142  
REFERENCE/DOCKET NUMBER: Case Docket 9339  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 235-4205  
TELEFAX: (201) 235-2363  
INFORMATION FOR SEQ ID NO: 33:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 465 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 104  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 119  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 205  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 228  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 337  
OTHER INFORMATION: /note="potential N-glycosylation site"  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 374  
OTHER INFORMATION: /note="potential N-glycosylation site"  
US-08-744-231-33

Query Match 75.8%; Score 1867; DB 4; Length 465;  
Best Local Similarity 76.0%; Pred. No. 4.3e-187;  
Matches 355; Conservative 36; Mismatches 74; Indels 2; Gaps 2;

QY 1 MGVEVLLSTITLFGSISGTLGPRGNSHSCDVTYDGGYQCPPELSHLMGYSPFSLADE 60  
DB 1 MVTTLFLSLAAYLLSGRVSAPSSAG-SKSCDVTYDGGYQCPPELSHLMGYSPFSLADE 59  
QY 61 SAISPDVDDCRVTEFVYVLSRHGARYPTSSASKAYSALEIAQKNAFAFGKAFLEKTYN 120  
DB 60 LVSASKLPKDCRITLYOVLSHRGARYPTSSASKAYKRLVLAIQANADDFGKFAFLKTYN 119  
QY 121 YTLGADLTTPGENOMVNSGKIFRYRALKARKVTPPIRASGSDRVIASAEKIEGFQSA 180  
DB 120 YTLGADLTTPGEQOLVNSGKIFQRYKALARSVPPIRASGSDRVIASAEKIEGFQSA 179  
QY 181 KLADPGSPHQPASPVINVIIPESGYNNTLDHGCTAFEDSEIGDDVEANFTALFAPAIR 240  
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; Sequence 3, Application US/09155855  
; Patent No. 6139902  
; GENERAL INFORMATION:  
; APPLICANT: KONDO, Hidemasa  
; APPLICANT: ANAZAWA, Hideharu  
; APPLICANT: KANEKO, Syunichi  
; APPLICANT: NAGASHIMA, Tadashi  
; APPLICANT: TANGE, Tatsuya  
; TITLE OF INVENTION: NOVEL PHYTASE AND GENE ENCODING SAID PHYTASE  
; FILE REFERENCE: 81356/124  
; CURRENT APPLICATION NUMBER: US/09/155,855  
; CURRENT FILING DATE: 1998-10-05  
; EARLIER APPLICATION NUMBER: WO PCT/JP97/01175  
; EARLIER FILING DATE: 1997-04-04  
; EARLIER APPLICATION NUMBER: JP 084314  
; EARLIER FILING DATE: 1996-04-05  
; NUMBER OF SEQ ID NOS: 7  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 3  
; LENGTH: 467  
; TYPE: PRT  
; ORGANISM: Aspergillus niger  
US-09-155-855-3

Query Match 75.5%; Score 1860; DB 4; Length 467;  
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DB 421 LVRVILNDRVYVPLHGCPDALGRCRDRDFVEGLSFAKSGNNAECFA 467

Search completed: July 3, 2002, 09:33:14  
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About: Results were produced by the GenCore software, version 4.5,  
Copyright (c) 1993-2000 Compugen Ltd.

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## Search information block:

Query: US-09-488-265-30  
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; Patent No. 6153418  
; GENERAL INFORMATION:  
; APPLICANT: Lehmann, Martin  
; TITLE OF INVENTION: Consensus Phytases  
; FILE REFERENCE: Consensus Phytases 13239  
; CURRENT APPLICATION NUMBER: US/09121,425  
; EARLIER APPLICATION NUMBER: 1998-07-23  
; EARLIER FILING DATE: 1997-07-24  
; NUMBER OF SEQ ID NOS: 20  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 441  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:consensus  
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51	GlnValIleSerArgHisGlyAlaArgIrrProIrrSerSerly	67
279	GGCCTGCTGCTGCTGATGAGCTATTCAAAGAACGCTGCTGCTGCA	328
67	SalIrrSerAlaIleuIleGlnAlaIleGlnIlysmAlaIrrAlaPheL	84
329	ACGGTACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGAC	378
84	ysGlyIrrSerAlaIlePheleuIrrThrIrrAsnIrrThrleuGlyAlaasp	100
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101	AspIrrThrProPheGlyGluAsnGlnIrrValAsnSerGlyIrrIrrsph	117
429	CTACGAGAGATACAGGCTTGGCTGAGAAAGATGTTCCATTCATTCAG	478
117	etyIrrArgIrrGlyIrrAlaIrrAlaIrrArgIrrIrrIrrIrrIrrIrrIrr	134



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147 eaIaSerAlaGluIysPheIleGluIysPheGlnSerAlaIysLeuAla 164  
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691 TTCACGCTGCTTTCGCTCCACCAATTAGAGCTAAGTTGGAAGTCACTT 740  
231 PheThrAlaLeuPheAlaProAlaIleArgAlaArgLeuGluAlaAsp 247  
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331 ProValGlnAspHnIsglnThrAsnHnIsglnIleuAspSerAsnProAl 347  
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347 aThrPheProIeuAsnAlaThrLeuThrAlaAspPheSerHnIsglns 364  
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1291 GTTCATTCGACGCTTGTGTTGTTGACAAAGTGGTGAATGTAAGAGACA 1340  
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? APPLICANT: Van Loon, Adolphus  
? TITLE OF INVENTION: POLYPEPTIDES WITH PHYLASE ACTIVITY  
? NUMBER OF SEQUENCES: 35  
? CORRESPONDENCE ADDRESS:  
? ADDRESSEE: Hoffmann-La Roche Inc.  
? STREET: 340 Kingsland Street  
? CITY: Nutley  
? STATE: New Jersey  
? COUNTRY: United States of America  
? ZIP: 07110  
? COMPUTER READABLE FORM:  
? MEDIUM TYPE: Floppy disk  
? COMPUTER: IBM PC compatible  
? OPERATING SYSTEM: PC-DOS/MS-DOS  
? SOFTWARE: PatentIn Release #1.0, Version #1.25  
? CURRENT APPLICATION DATA:  
? APPLICATION NUMBER: US/08/868,435  
? FILING DATE:  
? CLASSIFICATION:  
? PRIOR APPLICATION DATA:  
? APPLICATION NUMBER: 08/744,231  
? FILING DATE:  
? ATTORNEY/AGENT INFORMATION:  
? NAME: Kass, Alan P  
? REGISTRATION NUMBER: 32142  
? REFERENCE/DOCKET NUMBER: Case Docket 9339  
? TELECOMMUNICATION INFORMATION:  
? TELEPHONE: (201) 235-2363  
? INFORMATION FOR SEQ ID NO: 33:  
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Sequence 33, Application US/08744231
Patent No. 6358722
GENERAL INFORMATION:
APPLICANT: Van Loon, Adolphus
APPLICANT: Mitchell, David
TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY
NUMBER OF SEQUENCES: 35
CORRESPONDENCE ADDRESS:
ADDRESS: Hoffmann-La Roche Inc.

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seq_documentation_block:
; Sequence 8, Application US/07923724
; Patent No. 5780292
; GENERAL INFORMATION:
; APPLICANT: Nevalainen, Helena K.M.
; APPLICANT: Paloheimo, Maria T.
; APPLICANT: Miettinen-Oinonen, Arja S.K.
; APPLICANT: Torkkeli, Tuula K.
; APPLICANT: Cantrell, Michael
; APPLICANT: Piddington, Christopher S.
; APPLICANT: Rambosek, John A.
; APPLICANT: Turunen, Marja K.
; APPLICANT: Fagerstr m, Richard B.
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes
; TITLE OF INVENTION: In Trichoderma
; NUMBER OF SEQUENCES: 66
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
; ADDRESS: 1100 New York Avenue, Suite 600
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/923,724
; FILING DATE: 31-JUL-1992
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/496,155

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; FILING DATE: 19-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/044,077
; FILING DATE: 29-APR-1987
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 8610600
; FILING DATE: 30-APR-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Cimballa, Michele A.
; REGISTRATION NUMBER: 33,851
; REFERENCE/DOCKET NUMBER: 1050.0240004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 371-2540
; TELEFAX: (202) 371-2540
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-07-923-724-8

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seq_documentation_block:
; Sequence 8, Application US/08609426A
; Patent No. 5830733
; GENERAL INFORMATION:
; APPLICANT: Nevalainen, Helena K.M.
; APPLICANT: Palohelmo, Marja T.
; APPLICANT: Miettinen-Oinonen, Arja S.K.
; APPLICANT: Torkkeli, Tuula K.
; APPLICANT: Cantrell, Michael
; APPLICANT: Piddington, Christopher S.
; APPLICANT: Rambosek, John A.
; APPLICANT: Turunen, Marja K.
; APPLICANT: Fagerstr m, Richard B.
; APPLICANT: Houston, Christine S.
; TITLE OF INVENTION: Production of Phytase Degrading Enzymes
; TITLE OF INVENTION: In Trichoderma
; NUMBER OF SEQUENCES: 69
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
; STREET: 1100 New York Avenue, Suite 600
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentln Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/609,426A
; FILING DATE: 01-MAR-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/923,724
; FILING DATE: 31-JUL-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/496,155
; FILING DATE: 19-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/044,077
; FILING DATE: 29-APR-1987
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 8610600
; FILING DATE: 30-APR-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Reed, Grant E.
; REGISTRATION NUMBER: P-41,264
; REFERENCE/DOCKET NUMBER: 1050.0080001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 371-2600
; TELEFAX: (202) 371-2540
; INFORMATION FOR SEO ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-609-426A-8

alignment_scores:
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Ratio: 4.452 Gaps: 0
Percent Similarity: 89.079 Percent Identity: 74.304

alignment_block:
US-09-488-265-30 x US-08-609-426A-8

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Align seg 1/1 to: US-08-609-426A-8 from: 1 to: 467

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1251 AAAGAACCAATTTGTTAGAGTTTGGTTTACGACAGAGCTTGTCCAT 1300
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seq\_documentation\_block:

Sequence 2, Application US/08374652C

Patent No. 5834286

GENERAL INFORMATION:

APPLICANT: NEVALAINEN, HELENA K.M.

APPLICANT: PALOHEIMO, MARIA T.

APPLICANT: FAGERSTROM, RICHARD B.

APPLICANT: MIETTINEN-OINONEN, ARJA S.

APPLICANT: TURONEN, MARIA K.

APPLICANT: RAMBOSEK, JOHN A.

APPLICANT: PIDDINGTON, CHRISTOPHER S.

APPLICANT: HOUSTON, CHRISTINE S.

APPLICANT: CANTRELL, MICHAEL A.

TITLE OF INVENTION: RECOMBINANT CELLS, DNA CONSTRUCTS, VECTORS AND METHODS FOR EXPRESSING PHYTATE DEGRADING ENZYMES IN DESIRED RATIOS

TITLE OF INVENTION: 94

NUMBER OF SEQUENCES: 94

CORRESPONDENCE ADDRESS:

ADDRESSSEE: STERNER, KESSLER, GOLDSTEIN & FOX P.L.L.C.

STREET: 1100 NEW YORK AVENUE, SUITE 600

CITY: WASHINGTON

STATE: DC

COUNTRY: USA

ZIP: 20005

COMPUTER READABLE FORM:



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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/374.652C
FILING DATE: 24-MAY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/07058
FILING DATE: 27-JUL-1993
CLASSIFICATION: 435
APPLICATION DATA:
APPLICATION NUMBER: US 07/925,401
FILING DATE: 31-JUL-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: REED, GRANT E.
REGISTRATION NUMBER: 41,264
REFERENCE/DOCKET NUMBER: 1050, 071001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: not relevant
MOLECULE TYPE: protein
US-08-374-652C-2

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17 rSerGlyLeuAlaValProAlaSerArgAsnGlnSerThrcysAspThr 34
101 TTGACGGTGTATACCAATGTTCCAGAAATTTCTCACTGTCGGGTACA 150
34 AlaSpGlnGlyTrpGlnCysPheSerGluThrSerHisLeuTrpGlyGln 50
151 TACTCTCATTTCTCTCTGTCGTCGACCAATGTCATTTCTCCAGAGCT 200
51 TyrAlaProPhePheSerLeuAlaAsnGlnSerAlaIleSerProAspVa 67
201 TCCAAAGGGTGTAGAGTTACTTTCGTTCAAGTTTGTCTAGACACGCTG 250
67 lProAlaGlyCysArgValAlaThrPheAlaGlnValLeuSerArgHisGly 84
251 CTAGATACCCCACTTCTGTCGCTGTAAGCGCTACTGTCCTTGATGAA 300
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301 GCATTGAAGAAGAGCTACTGCTTTCAGGTAAGTAAGCTTCTTGAA 350
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151 ThrArgAsnIleIleProPheIleArgSerSerGlySerSerArgValI 167
501 TGCTCTGCTGTAAGGTTCAATTGAAGGTTTCCATTCGCTCAAGTTGGCTG 550
167 eAlaSerGlyLysPheIleGlnGlyPheGlnSerThrLysLeuLysA 184
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184 sProIArgAlaGlnProGlyLysSerProLysIleAspValValIle 200
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267 pThrIleSerThrSerThrValAspThrLysLeuSerProPheCysAsp 284
851 TGTTCACCTACAGAGAAATGATCAATACAGACTACTTTCATGTTGGGT 900
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901 AAGTACTACGGTTACAGTGTGCTGTAACCCATTTGGGTGTCAGCTGAGT 950
301 LysTyrTyrGlyHisGlyAlaGlnAsnProLeuGlyProThrGlnGlyVa 317
951 TGGTTGCTTAAGCAATGATTTGCTAGATTGACTACCTGTCAGTTCAAG 1000
317 lGlyTyrAlaAsnGlnLeuIleAlaArgLeuThrHisSerProValHisA 334
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334 sPspThrSerSerAsnHisThrLeuAspSerAsnProAlaThrPhePro 350
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351 LeuAsnSerThrLeuTyrAlaAspPheSerHisAspAsnGlyIleIleSe 367
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; Sequence 32, Application US/08151574
; Patent No. 5436156
; GENERAL INFORMATION:
; APPLICANT: Robert F.M. Van Gorcom
; APPLICANT: Willem Van Hartingsveldt
; APPLICANT: Petrus A. Van Paridon
; APPLICANT: Annemarie E. Veenstra
; APPLICANT: Rudolf G.M. Luitin
; TITLE OF INVENTION: Cloning and Expression of Microbial
; TITLE OF INVENTION: Phytase
; NUMBER OF SEQUENCES: 52
; CORRESPONDENCE ADDRESS:
; ADDRESS: Morrison & Foerster
; STREET: 545 Middlefield Road, Suite 200
; CITY: Menlo Park
; STATE: California
; COUNTRY: USA
; ZIP: 94025-3471
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/151,574
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/688,578
; FILING DATE: 24-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H.
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 24615-20026.00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-327-7250
; INFORMATION FOR SEQ ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
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1001 ACCACACTCTACTACACACACTTGTGACTTAACCCAGCTACTTCCCA 1050
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1201 GTTCATTCGCTGCTAGAGCTTACGTTGAATGATGCAATGTGAGCTGA 1250
401 ValProPheAlaSerArgLeuTyrValGluMetGlnGlnCysGlnAlaG 417
1251 AAAGAACCAATTGTTAGACTTTTGGTTAAAGACAGAGATTGTTCCATTGC 1300
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1351 GAAGGTGTGCTTTCGCTAGATCTGCTGAACCTGAGAGAAATGTTTGC 1400
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; Sequence 2, Application US/08693709
; Patent No. 5770413
; GENERAL INFORMATION:
; APPLICANT: VAN OOIJEN, ALBERT J.J.
; APPLICANT: RIETVELD, KRIJN
; APPLICANT: HOEKEMA, ANDREAS
; APPLICANT: PEN, JAN
; APPLICANT: SIMONS, PETER C.
; APPLICANT: VERMOERD, TEUNIS C.
; TITLE OF INVENTION: THE EXPRESSION OF PHYLASE
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESS: MORRISON & FOERSTER
; STREET: 755 PAGE MILL ROAD
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94304-1018
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FASTSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/693,709
; FILING DATE: 07-AUG-1996
; CLASSIFICATION: 800
; PRIORITY APPLICATION DATA:
; APPLICATION NUMBER: 08/146,424
; FILING DATE: 02-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 24615-20011.10
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-813-5600
; TELEFAX: 415-494-0792
; TELEX: 706141
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 467 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
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; FEATURE:
; NAME/KEY: Signal Sequence
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; OTHER INFORMATION:
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alignment_scores:
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Align seg 1/1 to: US-08-693-709-2 from: 1 to: 467

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?      1151 CTCTGTTGAATCTATTGAGAACAACGTACGCTACTCTGCTTGTGAACT 1200
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seq_documentation_block:
? Sequence 32 Application US/08419448
? Patent No. 586353
? GENERAL INFORMATION:
? APPLICANT: Robert F.M. Van Gorcom
? APPLICANT: Willem Van Harlingsveldt
? APPLICANT: Petrus A. Van Paridon
? APPLICANT: Annemarie E. Venestra
? APPLICANT: Rudolf G.M. Luttin
? TITLE OF INVENTION: Cloning and Expression of Microbial
? TITLE OF INVENTION: Phytase
? NUMBER OF SEQUENCES: 52
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: Morrissey & Foerster
? STREET: 2000 Pennsylvania Ave. N.W., Suite 5500
? CITY: Washington
? STATE: D.C.
? COUNTRY: USA
? ZIP: 20006-1888
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? COMPUTER: IBM PC compatible
? OPERATING SYSTEM: PC-DOS/MS-DOS
? SOFTWARE: Patentin Release #1.0, Version #1.25
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/419,448
? FILING DATE: 10-APR-1995
? CLASSIFICATION: 435
? ATTORNEY/AGENT INFORMATION:
? NAME: Murashige, Kate H.
? REGISTRATION NUMBER: 29,959
? REFERENCE/DOCKET NUMBER: 24615-20026.10
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: 202-887-1500
? INFORMATION FOR SEQ ID NO: 32:
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## CORRESPONDENCE ADDRESS:

ADDRESS: No. 58661180 No. 58661180disk of No. 5866118th America, Inc.  
STREET: 405 Lexington Avenue, Suite 6400  
CITY: New York  
STATE: New York  
COUNTRY: U.S.A.  
ZIP: 10174-6401  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSEO for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,825  
FILING DATE: 18-MAR-1997  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lambiris, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4758.200-US  
TELEPHONE: 212 867 0123  
TELEFAX: 212 867 0298  
INFORMATION FOR SEO ID NO: 3  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
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TOPOLOGY: linear  
US-08-819-825-3

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/ Patent No. 6350602
/ GENERAL INFORMATION:
/ APPLICANT: Robert F.M. Van Gorcom
/ APPLICANT: Willem Van Hartingsveldt
/ APPLICANT: Petrus A. Van Paridon
/ APPLICANT: Annemarie E. Veenstra
/ APPLICANT: Rudolf G.M. Luitlin
/ TITLE OF INVENTION: Cloning and Expression of Microbial
/ NUMBER OF SEQUENCES: 52
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Morrison & Foerster
/ STREET: 345 Middlefield Road, suite 200
/ CITY: Menlo Park
/ STATE: California
/ COUNTRY: USA
/ ZIP: 94025-3471
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/09/233,510
/ FILING DATE:
/ CLASSIFICATION:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: 07/688,578

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FILING DATE: 24-MAY-1991
ATTORNEY/AGENT INFORMATION:
NAME: Murashige, Kate H.
REGISTRATION NUMBER: 29,959
REFERENCE/DOCKET NUMBER: 24615-20026.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-327-7250
TELEFAX: 415-327-2951
INFORMATION FOR SEQ ID NO: 32:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-233-510-32

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Ratio: 4.432 Gaps: 0
Percent Similarity: 89.293 Percent Identity: 74.304

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; Patent No. 6139902
; GENERAL INFORMATION:
; APPLICANT: KONDO, Hidemasa
; APPLICANT: ANAZAWA, Hideharu
; APPLICANT: KANEKO, Syunichi
; APPLICANT: NAGASHIMA, Tadashi
; APPLICANT: TANGE, Tatsuya
; TITLE OF INVENTION: NOVEL PHYTASE AND GENE ENCODING SAID PHYTASE
; FILE REFERENCE: 81356/124
; CURRENT APPLICATION NUMBER: US/09/155, 855
; EARLIER FILING DATE: 1998-10-05
; EARLIER APPLICATION NUMBER: WO PCT/JP97/01175
; EARLIER FILING DATE: 1997-04-04
; EARLIER APPLICATION NUMBER: JP 084314
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 3
; LENGTH: 467
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; US-09-155-855-3

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Copyright (c) 1993 - 2000 Compugen Ltd.

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Gapop 10.0 , Gapext 0.5

Searched: 231628 seqs, 24425594 residues

Total number of hits satisfying chosen parameters: 231628

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database :

Issued\_Patents\_AA:\*  
1: /cgn2\_6/prodata/2/iaa/5A\_COMB.pep:\*  
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5: /cgn2\_6/prodata/2/iaa/PCBUS\_COMB.pep:\*  
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description
1	2182	88.4	441	4	US-09-121-425-1 Sequence 1, Appli
2	2170	87.9	467	4	US-09-121-425-2 Sequence 2, Appli
3	1888	76.5	465	4	US-08-868-435-33 Sequence 33, Appli
4	1888	76.5	465	4	US-08-744-231-33 Sequence 33, Appli
5	1852	75.0	467	1	US-07-923-724-8 Sequence 8, Appli
6	1852	75.0	467	2	US-08-609-426A-6 Sequence 8, Appli
7	1852	75.0	467	2	US-08-374-652C-2 Sequence 32, Appli
8	1848	74.9	467	1	US-08-151-574-32 Sequence 32, Appli
9	1848	74.9	467	1	US-08-146-424-20 Sequence 20, Appli
10	1848	74.9	467	2	US-08-419-448-32 Sequence 32, Appli
11	1848	74.9	467	2	US-08-819-825-3 Sequence 3, Appli
12	1848	74.9	467	2	US-09-163-642-3 Sequence 32, Appli
13	1848	74.9	467	4	US-09-233-510-32 Sequence 3, Appli
14	1848	74.9	467	4	US-09-155-855-3 Sequence 3, Appli
15	1841	74.6	467	4	US-09-543-744-3 Sequence 35, Appli
16	1841	74.6	467	4	US-08-868-435-35 Sequence 35, Appli
17	1822	73.8	466	4	US-08-744-231-35 Sequence 35, Appli
18	1822	73.8	466	4	US-08-868-435-12 Sequence 12, Appli
19	1819	73.7	466	4	US-08-744-231-12 Sequence 12, Appli
20	1819	73.7	466	4	US-08-868-435-29 Sequence 29, Appli
21	1804.5	73.1	463	4	US-08-155-855-1 Sequence 1, Appli
22	1804.5	73.1	463	4	US-09-543-744-1 Sequence 1, Appli
23	1799	72.9	443	4	US-09-155-855-1 Sequence 1, Appli
24	1799	72.9	443	4	US-09-543-744-1 Sequence 1, Appli
25	1794	72.7	443	4	US-09-155-855-1 Sequence 2, Appli
26	1794	72.7	443	4	US-09-543-744-2 Sequence 2, Appli
27	1752	71.0	466	4	US-08-868-435-2 Sequence 2, Appli

28	1752	71.0	466	4	US-08-744-231-2 Sequence 2, Appli
29	1710	69.3	466	4	US-08-868-435-31 Sequence 31, Appli
30	1710	69.3	466	4	US-08-744-231-31 Sequence 31, Appli
31	1381	56.0	475	2	US-08-819-825-2 Sequence 2, Appli
32	1381	56.0	475	4	US-09-163-642-2 Sequence 2, Appli
33	1334.5	54.1	487	4	US-08-868-435-4 Sequence 4, Appli
34	1334.5	54.1	487	4	US-08-744-231-4 Sequence 4, Appli
35	845.5	34.3	443	3	US-08-993-359-30 Sequence 30, Appli
36	833.5	33.8	453	3	US-08-993-359-22 Sequence 22, Appli
37	830.5	33.7	439	3	US-08-993-359-24 Sequence 24, Appli
38	830.5	33.7	439	3	US-09-221-654-2 Sequence 2, Appli
39	830.5	33.7	439	3	US-08-989-358A-2 Sequence 2, Appli
40	825	33.4	442	3	US-08-993-359-26 Sequence 26, Appli
41	814	33.0	442	3	US-08-993-359-26 Sequence 2, Appli
42	359	14.5	468	1	US-07-627-539G-2 Sequence 2, Appli
43	354.5	14.4	446	1	US-07-627-539G-7 Sequence 7, Appli
44	354.5	14.4	479	1	US-07-923-724-2 Sequence 2, Appli
45	354.5	14.4	479	2	US-08-609-426A-2 Sequence 2, Appli

#### ALIGNMENTS

RESULT 1  
US-09-121-425-1  
; Sequence 1, Application US/09121425  
; Patent No. 6153418  
; GENERAL INFORMATION:  
; APPLICANT: Lehmann, Martin  
; TITLE OF INVENTION: Consensus Phytases  
; FILE REFERENCE: Consensus phytases 13239  
; CURRENT APPLICATION NUMBER: US/09/121,425  
; CURRENT FILING DATE: 1998-07-23  
; EARLIER APPLICATION NUMBER: EPO 97112688.3  
; EARLIER FILING DATE: 1997-07-24  
; NUMBER OF SEQ ID NOS: 20  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 441  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:consensus  
US-09-121-425-1

Query Match 88.4%; Score 2182; DB 4; Length 441;  
Best Local Similarity 93.0%; Pred. No. 6.6e-217;  
Matches 410; Conservative 11; Mismatches 20; Indels 0; Gaps 0;  
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Db 1 NSHCDPVYDGYOCPPELSHLMGTYSPFFSLADESAISPPVKGRCVTEVOVLSRHGARY 60  
QY 87 PTSSAKRAYSALIEAIOKNATFAFGKAYFLKTYNTTGADLDPFGGQOVNNGICFYRR 146  
Db 61 PTSSAKRAYSALIEAIOKNATFAFGKAYFLKTYNTTGADLDPFGGQOVNNGICFYRR 120  
QY 147 YKAAKRIYVPIRASGDRYIASAEKFIKESFQSAKLADPGANPHQASPYVINTIIPGAGY 206  
Db 121 YKAAKRIYVPIRASGDRYIASAEKFIKESFQSAKLADPGANPHQASPYVINTIIPGAGY 180  
QY 207 NNTLDHGLCTAFESSELDGVDVEANFTAVFAPTRARLEAHLPGVNTLTDEVDVNLDMCF 266  
Db 181 NNTLDHGLCTAFESSELDGVDVEANFTAVFAPTRARLEAHLPGVNTLTDEVDVNLDMCF 240  
QY 267 DYVAKRSDATQSPFCDLFTHDEMIOYDIOSLGKYYGAGNPLGPAQGVFVDELAR 326  
Db 241 ETVAKRSDATEISPFCALETHDEMIOYDIOSLGKYYGAGNPLGPAQGVFVDELAR 300  
QY 327 LTHSPVODHSTHTHTLDSNATPFPPLNATLYADFSHDNINWVSIFPALGLYNGKPLSTTSV 386  
|||

DB 301 LRRSPVODHTSNHTLDSNPATPLNATLYADFSHDNSMISIFPALGLYNGTAPLSTTSV 360  
OY 387 ESTEETDGTASWYVPPAARAVEMMOCEAEKEPELVRYLVNDRVVPPLHGGVDKLGRCR 446  
DB 361 ESTEETDGTASWYVPPAARAVEMMOCEAEKEPELVRYLVNDRVVPPLHGGVDKLGRCR 420  
OY 447 DDFVEGLSFARSGGNWEECEFA 467  
DB 421 DDFVEGLSFARSGGNWEECEFA 441

RESULT 2  
US-09-121-425-2  
; Sequence 2, Application US/09121425  
; Patent No. 6153418  
; GENERAL INFORMATION:  
; APPLICANT: Lehmann, Martin  
; TITLE OF INVENTION: Consensus phytases  
; FILE REFERENCE: consensus phytases 13239  
; CURRENT APPLICATION NUMBER: US/09/121,425  
; EARLIER FILING DATE: 1998-07-23  
; EARLIER APPLICATION NUMBER: EPO 97112688.3  
; NUMBER OF SEQ ID NOS: 20  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 2  
; LENGTH: 467  
; TYPE: PRF  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:consensus  
US-09-121-425-2

Query Match 87.9%; Score 2170; DB 4; Length 467;  
Best Local Similarity 85.4%; Pred. No. 1.3e-215;  
Matches 416; Conservative 11; Mismatches 20; Indels 40; Gaps 2;

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OY 61 SAISPDVKKGRVFPVQYLSRHGARYPTSSASAKYASALIAIQKNATAFKGYATFKTYN 120  
DB 61 SAISPDVKKGRVFPVQYLSRHGARYPTSSASAKYASALIAIQKNATAFKGYATFKTYN 120  
OY 121 YTLGADDLTPFGEOQMVNSGKIFRYRRYKALARKIVPFIIRASGSDRYVIAAEKFIETGFOQA 180  
DB 121 YTLGADDLTPFGEOQMVNSGKIFRYRRYKALARKIVPFIIRASGSDRYVIAAEKFIETGFOQA 180  
OY 101 YTLGADDLTPFGEOQMVNSGKIFRYRRYKALARKIVPFIIRASGSDRYVIAAEKFIETGFOQA 160  
DB 101 YTLGADDLTPFGEOQMVNSGKIFRYRRYKALARKIVPFIIRASGSDRYVIAAEKFIETGFOQA 160  
OY 181 KLADGANPHQASPVIN-----VIIPEGAGYNNITDHLCTAFEE 220  
DB 181 KLADGANPHQASPVIN-----VIIPEGAGYNNITDHLCTAFEE 220  
OY 161 KLADPGSQPHQSPVIDLIEAIQKNATAFKGYATFKTYNIIPEGAGYNNITDHLCTAFED 220  
DB 161 KLADPGSQPHQSPVIDLIEAIQKNATAFKGYATFKTYNIIPEGAGYNNITDHLCTAFED 220  
OY 221 SELGDVENVNTAFVAPPRIARLEAHLPGVNLTDENVNLMDKCPFTVARTSDATQISP 280  
DB 221 SELGDVENVNTAFVAPPRIARLEAHLPGVNLTDENVNLMDKCPFTVARTSDATQISP 280  
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DB 341 TLDSPNATPLNATLYADFSHDNSMISIFPALGLYNGTAPLSTTSVSEIETDGTASWY 400  
OY 401 VPPAARAVEMMOCEAEKEPELVRYLVNDRVVPPLHGGVDKLGRCRDDVFGLSFARSGG 460  
DB 401 VPPAARAVEMMOCEAEKEPELVRYLVNDRVVPPLHGGVDKLGRCRDDVFGLSFARSGG 460  
OY 461 NMEECEFA 467  
DB 461 NMEECEFA 467

DB 461 NMEECEFA 467

RESULT 3  
US-08-868-435-33  
; Sequence 33, Application US/08868435  
; Patent No. 6291221  
; GENERAL INFORMATION:  
; APPLICANT: Van Loon, Adolphus  
; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY  
; NUMBER OF SEQUENCES: 35  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hoffmann-La Roche Inc.  
; STREET: 340 Kingsland Street  
; CITY: Nutley  
; STATE: New Jersey  
; COUNTRY: United States of America  
; ZIP: 07110  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentln Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/868,435  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/744,231  
; FILING DATE:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Kaas, Alan P  
; REGISTRATION NUMBER: 32142  
; REFERENCE/DOCKET NUMBER: Case Docket 9339  
; TELEPHONE: (201) 235-4205  
; TELEFAX: (201) 235-2363  
; INFORMATION FOR SEQ ID NO: 33:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 465 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 104  
; OTHER INFORMATION: /note="potential N-glycosylation site"  
; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 119  
; OTHER INFORMATION: /note="potential N-glycosylation site"  
; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 205  
; OTHER INFORMATION: /note="potential N-glycosylation site"  
; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 228  
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; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 337  
; OTHER INFORMATION: /note="potential N-glycosylation site"  
; FEATURE:  
; NAME/KEY: misc\_feature  
; LOCATION: 374  
; OTHER INFORMATION: /note="potential N-glycosylation site"  
US-08-868-435-33

Query Match 76.5%; Score 1888; DB 4; Length 465;  
Best Local Similarity 76.9%; Pred. No. 1.7e-186;

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QY	1	MGVFVLLSLATLFGSTGCTALGPRGNHSCDTPDGGYOCFPEISHLMGTGSPFSLADE	60		
Db	1	MTATLFLLSAAAYLLSGRVSAAAPSAG-SKSCDTPVDLGQCSPATSHLMQGPSFSLDE	59		
QY	61	SAISPDVPGKCVTFEFGVYLSRHGARGPTSSAKAYSALEALLOKNAATARKGAAELKTYN	120		
Db	60	LSVSKSLPDKCRITLIVOLSRHGARGPTSSAKKKKLTVALIOANATPEKGFALCKTYN	119		
QY	121	YTLGADDLTPBEEOQWNSGKIFRYRYKALARKIVPFTIRASGSDRVIASAEKIEGFOSA	180		
Db	120	YTLGADDLTPBEEOQLVNSGKIFKYORYKALARSVPFTIRASGSDRVIASGEKFIIGFOA	179		
QY	181	KLADGANDHQAQSVINYIIPGAGYNNTHLHGCTATAFEESLGGDYVANTAVAPPIR	240		
Db	180	KLADGAG-NRRAPAISVYIIPSESEFNNTHLHGCTKKAESOLGDEVANATFAFPPIR	238		
QY	241	ARLEAHILGYNLTDEDDVYNLMDMCPEDTVAARTSDATQLSPPCDLTHEDMELQYDVLGIG	300		
Db	239	AAAEHHLGCVTLTDEDDVYSLMDMCSFDTVAARTSDAQSPPCOLFTHNEMKKYNTLSLG	298		
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QY	361	HDNMYSTFEFLGLXNGTKPLSTTSVSEIETDGYASATVPVFAARAYVEMAOCEAEKER	420		
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RESULT 4  
 US-08-744-231-33  
 ; Sequence 33, Application US/08744231  
 ; Patent No. 6358722  
 ;  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Van Loon, Adolphus  
 ; APPLICANT: Mitchell, David  
 ; TITLE OF INVENTION: POLYPEPTIDES WITH PHYTASE ACTIVITY  
 ; NUMBER OF SEQUENCES: 35  
 ;  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Hoffmann-La Roche Inc.  
 ; STREET: 340 Kingsland Street  
 ; CITY: Nutley  
 ; STATE: New Jersey  
 ; COUNTRY: United States of America  
 ; ZIP: 07110  
 ;  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25  
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 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/744,231  
 ; FILING DATE:  
 ; CLASSIFICATION: 435  
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 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 08/424,757  
 ; FILING DATE: 18-Apr-1995  
 ;  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Kass, Alan P  
 ;  
 ; REGISTRATION NUMBER: 32142  
 ; REFERENCE/DOCKET NUMBER: Case Docket 9339  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: (201) 235-4205  
 ; TELEFAX: (201) 235-2363  
 ;  
 ; INFORMATION FOR SEQ ID NO: 33:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 465 amino acids

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1 TYPE: amino acid
2 TOPOLOGY: linear
3 MOLECULE TYPE: protein
4 FEATURE:
5 NAME/KEY: misc_feature
6 LOCATION: 104
7 OTHER INFORMATION: /note="potential N-glycosylation site"
8 FEATURE:
9 NAME/KEY: misc_feature
10 LOCATION: 119
11 OTHER INFORMATION: /note="potential N-glycosylation site"
12 FEATURE:
13 NAME/KEY: misc_feature
14 LOCATION: 205
15 OTHER INFORMATION: /note="potential N-glycosylation site"
16 FEATURE:
17 NAME/KEY: misc_feature
18 LOCATION: 228
19 OTHER INFORMATION: /note="potential N-glycosylation site"
20 FEATURE:
21 NAME/KEY: misc_feature
22 LOCATION: 337
23 OTHER INFORMATION: /note="potential N-glycosylation site"
24 FEATURE:
25 NAME/KEY: misc_feature
26 LOCATION: 374
27 OTHER INFORMATION: /note="potential N-glycosylation site"
28
29 US-08-744-231-33

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Query Match	76.5%;	Score 1888;	DB 4;	Length 465;
Best Local Similarity	76.9%;	Pred. No. 1.7e-186;		
Matches 359;	Conservative 35;	Mismatches 71;		Indels

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0Y 1 MGWVVLITLITLLEFGSISGTCALDPBNGNSHCDPVDGCGYOCFPEISHMGWTSPPFFSLADE 60
Db 1 MWTTLTLLSAAYLLSRSVSAAPSSAG - SKSCDPVDVGCGSPATSHMGQYSPFFSLADE 59
0Y 61 SAISPDVPKGCRTFVQVLSRHGARYPTSSAKVSAVALIETAIOKNMTARKGYAPLKTJN 120
Db 60 LVSXKLPKDCRITLIVQVLSRHGARKPTSSKRTYKKLVTALIOANMTDPRKGFAFLKTJN 119
0Y 121 YTLGADDLIPFGQOOWNSIKFRRYKALKARKTYPIFIRASGSDRYATSAEKEFIEGQSA 180
Db 120 YTLGADDLIPFGQOOLVNSGIKFYQYKALKALASVVEFIRASGSDRYASGEKFIEGFOQA 179
0Y 181 KLADPGANHOASPVINVTIPEGAGNNLTDLGICLAFESLSDGVDYENLFAVAAPLR 240
Db 180 KLADPGAT - NRAAPALSVIIESEIPEFNLTLDGVCYCKEASOLGBEVANFALFALPDIR 238
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Db 239 ARAEKLPEVNTLDEBYVNLMDCEPDYVARTSDASOLSPFCQLPTHNMKKYNTLQSLG 298
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Db 299 KYGYGAGNPLDPAOGIGETNELLARLHSPVQDHTSNHLLDLSNAPRLEPLNATLYADFS 358
0Y 361 HNMVWSIFPALGLYNGRKPLJSTTSVESIIEETDGYASAMTVPFARARAYVENMOCEAEKPE 420
Db 359 HNMVWSIFPALGLYNGTEPLSRTSVESAKELDGYASAMVVPFGARAYFELMGOCKSEKEP 418
0Y 421 LVRVYVNDRVYPLHGCYDVKLGRCRKRDOPFVGLSPARSGGWMGECEFA 467
Db 419 LVYRALINDRVYPLHGCYDVKLGRCRKLDNPFVGLSWANSGWMMGCEFA 465

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RESULT 5  
US-07-923-724-8  
; Sequence 8, Application US/07923724  
; Patent No. 5780292  
; GENERAL INFORMATION:  
; APPLICANT: Nevalainen, Helena K.M

APPLICANT: Paloheimo, Marja T.  
APPLICANT: Miettinen-Oinonen, Arja S.K.  
APPLICANT: Torkkeli, Tuula K.  
APPLICANT: Cantrell, Michael  
APPLICANT: Piddington, Christopher S.  
APPLICANT: Rambosek, John A.  
APPLICANT: Turunen, Marja K.  
APPLICANT: Fagerstr m, Richard B.  
TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
TITLE OF INVENTION: in Trichoderma  
NUMBER OF SEQUENCES: 66  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
STREET: 1100 New York Avenue, Suite 600  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/923,724  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/496,155  
FILING DATE: 19-MAR-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/044,077  
FILING DATE: 29-APR-1987  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 8610600  
FILING DATE: 30-APR-1986  
ATTORNEY/AGENT INFORMATION:  
NAME: Cimballa, Michele A.  
REGISTRATION NUMBER: 33,851  
REFERENCE/DOCKET NUMBER: 1050,0240004  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 371-2600  
TELEFAX: (202) 371-2540  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-923-724-8

Query Match 75.0%; Score 1852; DB 1; Length 467;  
Best Local Similarity 74.3%; Pred. No. 9.2e-183;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

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DB 181 KLKDPRAQPGSSKIDIVIVSEASSNNLTDPCTCTVFDESELDIVVEANFTATFAPSIR 240  
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QY 361 HDNMTWISIFALGILNGTLPSTTSVESIEETDGYSASMTVPFAARAYVEMMOCEAEK 420  
DB 361 HDNMTWISIFALGILNGTLPSTTSVESIEETDGYSASMTVPFAARAYVEMMOCEAEK 420  
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DB 421 LVRLVNDRVYPLHGGVDKRCRKRDVEGLSFAKSGWMECEFA 467

RESULT 6  
US-08-609-426A-8  
Sequence 8, Application US/08609426A  
Patent No. 5830733  
GENERAL INFORMATION:  
APPLICANT: Nevalainen, Helena K.M.  
APPLICANT: Paloheimo, Marja T.  
APPLICANT: Miettinen-Oinonen, Arja S.K.  
APPLICANT: Torkkeli, Tuula K.  
APPLICANT: Cantrell, Michael  
APPLICANT: Piddington, Christopher S.  
APPLICANT: Rambosek, John A.  
APPLICANT: Turunen, Marja K.  
APPLICANT: Fagerstr m, Richard B.  
APPLICANT: Houston, Christine S.  
TITLE OF INVENTION: Production of Phytase Degrading Enzymes  
TITLE OF INVENTION: in Trichoderma  
NUMBER OF SEQUENCES: 69  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Sterne, Kessler, Goldstein & Fox  
STREET: 1100 New York Avenue, Suite 600  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/609,426A  
FILING DATE: 01-MAR-1996  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,724  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/496,155  
FILING DATE: 19-MAR-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/044,077  
FILING DATE: 29-APR-1987  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 8610600  
FILING DATE: 30-APR-1986  
ATTORNEY/AGENT INFORMATION:  
NAME: Reed Grant E.  
REGISTRATION NUMBER: P-41,264  
REFERENCE/DOCKET NUMBER: 1050,0080001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 371-2600  
TELEFAX: (202) 371-2540  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid



TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-609-426A-8

Query Match 75.0%; Score 1852; DB 2; Length 467;  
Best Local Similarity 74.3%; Pred. No. 9,2e-183;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGAVVLLSTATLFGSTGALGRGNSHSCDHYDGGYQCFPELISHLMGYSPFSLADE 60  
Db 1 MGAVAVLLPYLLAGVTSGLAVPASRNSQSTCDYDQYQCFSESHLMGYAFPFSLANE 60  
QY 61 SAISPDVPCRCRYTEVOVLSRHGARYPTSSAKAYSLIAIOTKNAFAEKYAFILKTYN 120  
Db 61 SAISPDVPCRCRYTEFAOVLSRHGARYPTESKGRKYSALIEIQONTTFPGKAYFLKTYN 120  
QY 121 YTLGADDLTFPGGQOMVNSGIRKRYRKALARKIVPEIRASGSDRYASAEKFEIGFOST 180  
Db 121 YSLGADDLTFPGGQELVNSGIRKRYRESLTRNIIPIFIRSSGSRVIAAGEKFEIGFOST 180  
QY 181 KLADPGANPHQASPVINVIIPBAGYNNLIDHGLCTAFESSELGDDVEANFTAVFAPPIR 240  
Db 181 KLADPGANPHQASPVKIDVYISEASSNNLIDPCTCFVFDSELDADVEANFTATFAPSIR 240  
QY 241 ARLEAHLPGVNLDEDEVNLMDCPEDTYARTSDATOLSPFCDLFTHDEMIOYDYLQSLG 300  
Db 241 ORLENDLSGVTLTDEVTYLMDCSPDTISTSTVDTKLSPFCDLFTHDEMIOYDYLQSLK 300  
QY 301 KYGYGAGNPLGPAQGVGVNELIARLTHSPVODHTSTNHLDSNPATFPLNATLYADFS 360  
Db 301 KYGHGAGNPLGPAQGVGVNELIARLTHSPVODHTSSNHLDSNPATFPLNATLYADFS 360  
QY 361 HNTMYSIFALGLYNGTLPSTSVESIEEDTGYASATVFFARAYEMMOCAEKEP 420  
Db 361 HNGIISILFALGLYNGTLPSTTVEENTYTDGSSAMTVFASRLVEMMOCAOEOP 420  
QY 421 LVRVLYNDRVYPLHGGVYDKLGRCRDPFVEGLSPARSGGMAECSA 467  
Db 421 LVRVLYNDRVYPLHGGCPIDALGRCTRDTSFVRGLSPARSGGMAECSA 467

US-08-374-652C-2  
Sequence 2, Application US/08374652C

GENERAL INFORMATION:  
APPLICANT: NEVALAINEN, HELENA K.M.  
APPLICANT: PALOHEIMO, MARJA T.  
APPLICANT: FAGERSTROM, RICHARD B.  
APPLICANT: MIETTINEN-OINONEN, AKJA S.  
APPLICANT: TURUNEN, MARJA K.  
APPLICANT: RAMBOSER, JOHN A.  
APPLICANT: PIDDINGTON, CHRISTOPHER S.  
APPLICANT: HOUSTON, CHRISTINE S.  
APPLICANT: CANTRELL, MICHAEL A.  
TITLE OF INVENTION: RECOMBINANT CELLS, DNA CONSTRUCTS,  
TITLE OF INVENTION: VECTORS AND METHODS FOR EXPRESSING PHYTATE DEGRADING  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/374,652C  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07058  
FILING DATE: 27-JUL-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/925,401  
FILING DATE: 31-JUL-1992  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: REED, GRANT E.  
REGISTRATION NUMBER: 41,264  
REFERENCE/DOCKET NUMBER: 1050,071001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2540  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: not relevant  
MOLECULE TYPE: protein  
US-08-374-652C-2

Query Match 75.0%; Score 1852; DB 2; Length 467;  
Best Local Similarity 74.3%; Pred. No. 9,2e-183;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGAVVLLSTATLFGSTGALGRGNSHSCDHYDGGYQCFPELISHLMGYSPFSLADE 60  
Db 1 MGAVAVLLPYLLAGVTSGLAVPASRNSQSTCDYDQYQCFSESHLMGYAFPFSLANE 60  
QY 61 SAISPDVPCRCRYTEVOVLSRHGARYPTSSAKAYSLIAIOTKNAFAEKYAFILKTYN 120  
Db 61 SAISPDVPCRCRYTEFAOVLSRHGARYPTESKGRKYSALIEIQONTTFPGKAYFLKTYN 120  
QY 121 YTLGADDLTFPGGQOMVNSGIRKRYRKALARKIVPEIRASGSDRYASAEKFEIGFOST 180  
Db 121 YSLGADDLTFPGGQELVNSGIRKRYRESLTRNIIPIFIRSSGSRVIAAGEKFEIGFOST 180  
QY 181 KLADPGANPHQASPVINVIIPBAGYNNLIDHGLCTAFESSELGDDVEANFTAVFAPPIR 240  
Db 181 KLADPGANPHQASPVKIDVYISEASSNNLIDPCTCFVFDSELDADVEANFTATFAPSIR 240  
QY 241 ARLEAHLPGVNLDEDEVNLMDCPEDTYARTSDATOLSPFCDLFTHDEMIOYDYLQSLG 300  
Db 241 ORLENDLSGVTLTDEVTYLMDCSPDTISTSTVDTKLSPFCDLFTHDEMIOYDYLQSLK 300  
QY 301 KYGYGAGNPLGPAQGVGVNELIARLTHSPVODHTSTNHLDSNPATFPLNATLYADFS 360  
Db 301 KYGHGAGNPLGPAQGVGVNELIARLTHSPVODHTSSNHLDSNPATFPLNATLYADFS 360  
QY 361 HNTMYSIFALGLYNGTLPSTSVESIEEDTGYASATVFFARAYEMMOCAEKEP 420  
Db 361 HNGIISILFALGLYNGTLPSTTVEENTYTDGSSAMTVFASRLVEMMOCAOEOP 420  
QY 421 LVRVLYNDRVYPLHGGVYDKLGRCRDPFVEGLSPARSGGMAECSA 467  
Db 421 LVRVLYNDRVYPLHGGCPIDALGRCTRDTSFVRGLSPARSGGMAECSA 467

US-08-151-574-32  
Sequence 32, Application US/08151574  
Patent No. 5436156  
GENERAL INFORMATION:  
APPLICANT: Robert F.M. Van Gorcom  
APPLICANT: Willem Van Hartingsveldt  
APPLICANT: Petrus A. Van Paridon

APPLICANT: Annemarie E. Veenstra  
APPLICANT: Rudolf G.M. Luttin  
APPLICANT: Gerardus Selten  
TITLE OF INVENTION: Cloning and Expression of Microbial  
TITLE OF INVENTION: Phytase  
NUMBER OF SEQUENCES: 52  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Morrison & Foerster  
STREET: 545 Middlefield Road, Suite 200  
CITY: Menlo Park  
STATE: California  
COUNTRY: USA  
ZIP: 94025-3471  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/151,574  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/688,578  
FILING DATE: 24-MAY-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Murashige, Kate H.  
REGISTRATION NUMBER: 29,959  
REFERENCE/DOCKET NUMBER: 24615-20026.00  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-327-7250  
INFORMATION FOR SEQ ID NO: 32:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-151-574-32

Query Match 74.9%; Score 1848; DB 1; Length 467;  
Best Local Similarity 74.3%; Pred. No. 2.4e-182;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGVEVLLSIATLFGSTGTAIPRGNSHSCDVTGQYQCPPEISHLMGYSPEFLADE 60  
1 MGVSALLPLLYLISGVTSLAVPASRNOSCDVTGQYQCPPEISHLMGQYAPFSLANE 60  
DB 61 SAISPDVPGKRYTEFVQVLSRGARYPTSSASKAYSALIEA1OKNNAFAKGYAFLKTYN 120  
DB 61 SVISPEVPAGKRYTEFAOVLSRGARYPTDSKSKKYSALIEELQONATFFDGKAFLEKTYN 120  
QY 121 YTTGADDLTPPEEQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQSA 180  
DB 121 YSLGADDLTPPEEQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQST 180  
QY 181 KLADPGANPHQASPVINVIIPGAGYNNTLDHGLCTAFEESELGDDVANTFAVAPPIR 240  
DB 181 KLADPGANPHQASPVINVIIPGAGYNNTLDHGLCTAFEESELGDDVANTFAVAPPIR 240  
QY 241 ARLEAHLPGVNLTDEDEVNIMDMCPDPTVARTSDATQSLSPFCDLFTHEHWIOYDYLQSLG 300  
DB 241 QRLNDLSGVTLDTEFTYIMDMCSPTDITSTVDTKLSPCFDLFTHEHWINYDYLQSLK 300  
QY 301 KYVYGAGNPLGPAQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQSA 360  
DB 301 KYVYGAGNPLGPAQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQST 360  
QY 361 HDNMGVSIFFALGLYNGTKPLSTTSVESIETDGSASWTVPFAARAVYEMMQCEAKEP 420  
DB 361 HDNMGVSIFFALGLYNGTKPLSTTSVESIETDGSASWTVPFAARAVYEMMQCEAKEP 420

QY 421 LVRLVNDRVNRPVPLHGGCYDKIGRCKRDDEVEGLSPARSGNMEECPFA 467  
DB 421 LVRLVNDRVNRPVPLHGGCYDKIGRCKRDDEVEGLSPARSGNMEECPFA 467

RESULT 9  
US-08-146-424-20  
Sequence 20, Application US/08146424  
Patent No. 5593963  
GENERAL INFORMATION:  
APPLICANT: VAN OIJEN, ALBERT J. J.  
APPLICANT: RIETVELD, KRIJN  
APPLICANT: HOEKEMA, ANDREAS  
APPLICANT: PEN, JAN  
APPLICANT: SIMONS, PETER C.  
APPLICANT: VERWERD, TEUNIS C.  
TITLE OF INVENTION: THE EXPRESSION OF PHYTASE IN PLANTS  
NUMBER OF SEQUENCES: 31  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: MORRISON & FOERSTER  
STREET: 755 Page Mill Road  
CITY: Palo Alto  
STATE: California  
COUNTRY: USA  
ZIP: 94304-1018  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/146,424  
FILING DATE: 02-NOV-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: KENNEDY, BILL  
REGISTRATION NUMBER: 33,407  
REFERENCE/DOCKET NUMBER: 44615-20011.24  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (415) 813-5600  
TELEFAX: (415) 494-0792  
TELEX: 706141  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-146-424-20

Query Match 74.9%; Score 1848; DB 1; Length 467;  
Best Local Similarity 74.3%; Pred. No. 2.4e-182;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGVEVLLSIATLFGSTGTAIPRGNSHSCDVTGQYQCPPEISHLMGYSPEFLADE 60  
1 MGVSALLPLLYLISGVTSLAVPASRNOSCDVTGQYQCPPEISHLMGQYAPFSLANE 60  
DB 61 SAISPDVPGKRYTEFVQVLSRGARYPTSSASKAYSALIEA1OKNNAFAKGYAFLKTYN 120  
DB 61 SVISPEVPAGKRYTEFAOVLSRGARYPTDSKSKKYSALIEELQONATFFDGKAFLEKTYN 120  
QY 121 YTTGADDLTPPEEQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQSA 180  
DB 121 YSLGADDLTPPEEQGVNNGIKFYRRYKALARKIVPFIKASGSDRVIASAKFIEGQST 180  
QY 181 KLADPGANPHQASPVINVIIPGAGYNNTLDHGLCTAFEESELGDDVANTFAVAPPIR 240  
DB 181 KLADPGANPHQASPVINVIIPGAGYNNTLDHGLCTAFEESELGDDVANTFAVAPPIR 240  
QY 241 ARLEAHLPGVNLTDEDEVNIMDMCPDPTVARTSDATQSLSPFCDLFTHEHWIOYDYLQSLG 300  
DB 241 QRLNDLSGVTLDTEFTYIMDMCSPTDITSTVDTKLSPCFDLFTHEHWINYDYLQSLK 300

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US-RESULT 10
US-08-693-709-2
? Sequence 2, Application US/08693709
? Patent No. 5770413
? GENERAL INFORMATION:
? APPLICANT: VAN OOIJEN, ALBERT J.J.
? APPLICANT: RIETVELD, KRIJN
? APPLICANT: HOEKEMA, ANDREAS
? APPLICANT: PEN, JAN
? APPLICANT: SIMONS, PETER C.
? APPLICANT: VERWORDE, TEUNIS C.
? TITLE OF INVENTION: THE EXPRESSION OF PHYTASE
? TITLE OF INVENTION: IN PLANTS
? NUMBER OF SEQUENCES: 28
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: MORRISON & FOERSTER
? STREET: 755 PAGE MILL ROAD
? CITY: Palo Alto
? STATE: CA
? COUNTRY: USA
? ZIP: 94304-1018
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Diskette
? COMPUTER: IBM Compatible
? OPERATING SYSTEM: DOS
? SOFTWARE: FASTSEQ for Windows Version 2.0
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/693,709
? FILING DATE: 07-AUG-1996
? CLASSIFICATION: 800
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: 08/146,424
? FILING DATE: 02-NOV-1993
? ATTORNEY/AGENT INFORMATION:
? NAME: Murashige, Kate H
? REGISTRATION NUMBER: 29,959
? REFERENCE/DOCKET NUMBER: 24615-20011.10
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: 415-813-5600
? TELEFAX: 415-494-0792
? TELEX: 706141
? INFORMATION FOR SEQ ID NO: 2:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 467 amino acids
? TYPE: amino acid
? STRANDEDNESS: single
? TOPOLOGY: linear
? MOLECULE TYPE: protein
? FRAGMENT TYPE: Internal
? FEATURE:
? NAME/KEY: Signal Sequence
? LOCATION: 1...23
? OTHER INFORMATION:
US-08-693-709-2
Query Match 74.9% Score 1848, DB 1, Length 467
Best Local Similarity 74.3% Pred. No. 2,4e-182;

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RESULT 11  
 US-08-419-448-32  
 Sequence 32, Application US/08419448  
 Patent No. 5863533  
 GENERAL INFORMATION:  
 APPLICANT: Robert F. M. Van Gorcom  
 APPLICANT: Willem Van Hartingsveldt  
 APPLICANT: Petrus A. Van Peridon  
 APPLICANT: Annemarie E. Veenstra  
 APPLICANT: Rudolf G. M. Luttin  
 APPLICANT: Gerardus Selten  
 TITLE OF INVENTION: Cloning and Expression of Microbia  
 TITLE OF INVENTION: Phytase  
 NUMBER OF SEQUENCES: 52  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Morrison & Foerster  
 STREET: 2000 Pennsylvania Ave. N.W., Suite 5500  
 CITY: Washington  
 STATE: D.C.  
 COUNTRY: USA  
 ZIP: 20006-1888  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: PatentIn Release #1.0, Version #1.25  
 SOFTWARE:  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/419,448  
 FILING DATE: 10-APR-1995  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Murashige, Kate H.  
 REGISTRATION NUMBER: 29,959  
 REFERENCE/DOCKET NUMBER: 24615-20026.10  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 202-887-1500  
 INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-419-448-32

Query Match 74.9%; Score 1848; DB 2; Length 467;  
Best Local Similarity 74.3%; Pred. No. 2,4e-182;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGVEFVLISATLFGSTSGTALGPRGNSHSCDVTVDGQYQCFPEISHLMGTYSPPFSLADE 60  
DB 1 MGVSAILPLYLISGVTSLGAVPASRNOSCDVTVDGQYQCFSESHLMGTYPAPFSLANE 60  
QY 61 SAISPDVPKGCRTVFVQVLSRHGARYPTSSASKAYSALIEAIQKATAFKGYAFLKTYN 120  
DB 61 SVISPEVPAGCRVTPFAOVLSRHGARYPTDSKGGKYSALIEIQKATAFKGYAFLKTYN 120  
QY 121 YTLGADDLTPFGEOQMVNSGKIFRYRYKALARKIYPTIRASGSDRVYASAEKFIQFQSA 180  
DB 121 YSLGADDLTPFGEOELVNSGKIFRYRYKALARKIYPTIRASGSDRVYASAEKFIQFQSA 180  
QY 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDVEANFTAFVAPIR 240  
DB 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDVEANFTAFVAPIR 240  
QY 241 ARLEAHLPGVNLDEDEVYVNLMDKCPEDTARTSDATOLSPFCDLFTHDEMIOYDLOSLG 300  
DB 241 QRLNDLSGVTLTDEVTYVNLMDKCPEDTARTSDATOLSPFCDLFTHDEMIOYDLOSLG 300  
QY 301 KYGAGANPLGPAQGVGVNELLARLTHSPYODHTSNHTLDSNPATFPPLNATLYADFS 360  
DB 301 KYGAGANPLGPAQGVGVNELLARLTHSPYODHTSNHTLDSNPATFPPLNATLYADFS 360  
QY 361 HNTWVSIFPALGLYNGKTRPLSTTSVESIEETDGSASMTVPFAARAYEMMOCEAKEP 420  
DB 361 HDNGIISILFALGLYNGKTRPLSTTSVESIEETDGSASMTVPFAARAYEMMOCEAKEP 420  
QY 421 LVRVLVNDRVVPLHGGCVDKLGRCKRDDFVEGLSFARSGGMMEECPA 467  
DB 421 LVRVLVNDRVVPLHGGCVDKLGRCKRDDFVEGLSFARSGGMMEECPA 467

RESULT 12  
US-08-819-825-3  
Sequence 3, Application US/08819825  
Patent No. 5866118  
GENERAL INFORMATION:  
APPLICANT: Berka, Randy M.  
APPLICANT: Klotz, Alan V.  
TITLE OF INVENTION: Polypeptides Having Phytase Activity  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:  
ADDRESS: No. 58661180 No. 5866118disk of No. 5866118th America, Inc.  
STREET: 405 Lexington Avenue, Suite 6400  
CITY: New York  
STATE: New York  
COUNTRY: U.S.A.  
ZIP: 10174-6401  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,825  
FILING DATE: 18-MAR-1997  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:

NAME: lambdis, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4758, 200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212 867 0123  
TELEFAX: 212 867 0298  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 467 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
US-08-819-825-3

Query Match 74.9%; Score 1848; DB 2; Length 467;  
Best Local Similarity 74.3%; Pred. No. 2,4e-182;  
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;

QY 1 MGVEFVLISATLFGSTSGTALGPRGNSHSCDVTVDGQYQCFPEISHLMGTYSPPFSLADE 60  
DB 1 MGVSAILPLYLISGVTSLGAVPASRNOSCDVTVDGQYQCFSESHLMGTYPAPFSLANE 60  
QY 61 SAISPDVPKGCRTVFVQVLSRHGARYPTSSASKAYSALIEAIQKATAFKGYAFLKTYN 120  
DB 61 SVISPEVPAGCRVTPFAOVLSRHGARYPTDSKGGKYSALIEIQKATAFKGYAFLKTYN 120  
QY 121 YTLGADDLTPFGEOQMVNSGKIFRYRYKALARKIYPTIRASGSDRVYASAEKFIQFQSA 180  
DB 121 YSLGADDLTPFGEOELVNSGKIFRYRYKALARKIYPTIRASGSDRVYASAEKFIQFQSA 180  
QY 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDVEANFTAFVAPIR 240  
DB 181 KLADPGANPHOASPVYINVIIEGAGYNNITLDHGLCTAFEESELGDVEANFTAFVAPIR 240  
QY 241 ARLEAHLPGVNLDEDEVYVNLMDKCPEDTARTSDATOLSPFCDLFTHDEMIOYDLOSLG 300  
DB 241 QRLNDLSGVTLTDEVTYVNLMDKCPEDTARTSDATOLSPFCDLFTHDEMIOYDLOSLG 300  
QY 301 KYGAGANPLGPAQGVGVNELLARLTHSPYODHTSNHTLDSNPATFPPLNATLYADFS 360  
DB 301 KYGAGANPLGPAQGVGVNELLARLTHSPYODHTSNHTLDSNPATFPPLNATLYADFS 360  
QY 361 HNTWVSIFPALGLYNGKTRPLSTTSVESIEETDGSASMTVPFAARAYEMMOCEAKEP 420  
DB 361 HDNGIISILFALGLYNGKTRPLSTTSVESIEETDGSASMTVPFAARAYEMMOCEAKEP 420  
QY 421 LVRVLVNDRVVPLHGGCVDKLGRCKRDDFVEGLSFARSGGMMEECPA 467  
DB 421 LVRVLVNDRVVPLHGGCVDKLGRCKRDDFVEGLSFARSGGMMEECPA 467

RESULT 13  
US-09-163-642-3  
Sequence 3, Application US/09163642  
Patent No. 6221644  
GENERAL INFORMATION:  
APPLICANT: Berka, Randy M.  
APPLICANT: Klotz, Alan V.  
TITLE OF INVENTION: Polypeptides Having Phytase Activity  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:  
ADDRESS: No. 62216440 No. 6221644disk of No. 6221644th America, Inc.  
STREET: 405 Lexington Avenue, Suite 6400  
CITY: New York  
STATE: New York  
COUNTRY: U.S.A.  
ZIP: 10174-6401  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible

```
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/163,642
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/819,825
FILING DATE: 18-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 4758,200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 867 0123
TELEFAX: 212 867 0298
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-163-642-3
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Query Match 74.9% Score 1848; DB 4; Length 467;
Best Local Similarity 74.3%; Pred. No. 2.4e-182;
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;
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QY 1 MGVEVLLSLATLFGSTGALGPGNSHSCDVTGQYOCPELSHLMGYSPFSLADE 60
D 1 MGSAVALLPLLYLLSGVSLGAVPASRNQSCDVTGQYOCPELSHLMGYSPFSLANE 60
QY 61 SAISPDYKGCGRYFVQVLSRHGARYPTSSASKAYSALIEAIOKNATAFKGYAFLKTYN 120
D 61 SVISPEVPACGRYFAQVLSRHGARYPTDSKGRKYSALIEIOQNATTFDGKXAFLEKTYN 120
QY 121 YTLGADLTLPFGEOOMVNSGIRKRYKALARKIVPFRASGSDRYASAEKITEGQSA 180
D 121 YSLGADLTLPFGEOELVNSGIRKRYKALARKIVPFRASGSDRYASAEKITEGQSA 180
QY 181 KLADPGANPHQASPVINVIIPGAGYNNLTHGLCTAFEESELGDVEANFTAVFAPPIR 240
D 181 KLADPGANPHQASPVINVIIPGAGYNNLTHGLCTAFEESELGDVEANFTAVFAPPIR 240
QY 241 ARLEAHLPGVNLDEDEVNLMKCPEDTYARTSDATQLSPFCDLFTHDEMIQYDYLSLG 300
D 241 QRLNDLSGVTLLDTEVYLLMDKCSFDITISTVDTKLSPFCDLFTHDEMINVDYLSLK 300
QY 301 KYYGAGANPLGPAQGVGFVNELIARLTHSPVODHTSTNHHTLDSNPATPPLNATLYADS 360
D 301 KYYGAGANPLGPAQGVGFVNELIARLTHSPVODHTSTNHHTLDSNPATPPLNATLYADS 360
QY 361 HDNTMVSIFPALGLYNGTKPLSTTSVESIETDGYASWTVPFAARAYEVMQCEAKEP 420
D 361 HDNTMVSIFPALGLYNGTKPLSTTSVESIETDGYASWTVPFAARAYEVMQCEAKEP 420
QY 421 LVRLVNDRVVPLHGGCVNKLGRCKRDPFVEGLSPFARSGNMEECPA 467
D 421 LVRLVNDRVVPLHGGCVNKLGRCKRDPFVEGLSPFARSGNMEECPA 467
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```
RESULT 14
US-09-233-510-32
Sequence 32, Application US/09233510
Patent No. 6350602
GENERAL INFORMATION:
APPLICANT: Robert F.M. Van Gorcom
APPLICANT: Willem Van Harlingsveldt
APPLICANT: Petrus A. Van Paridon
APPLICANT: Annemarie E. Veenstra
APPLICANT: Rudolf G.M. Luttin
APPLICANT: Gerardus Selten
```

```
TITLE OF INVENTION: Cloning and Expression of Microbial
TITLE OF INVENTION: Phytase
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison & Foerster
STREET: 545 Middlefield Road, Suite 200
CITY: Menlo Park
STATE: California
COUNTRY: USA
ZIP: 94025-3471
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/233,510
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/688,578
FILING DATE: 24-MAY-1991
ATTORNEY/AGENT INFORMATION:
NAME: Murashige, Kate H.
REGISTRATION NUMBER: 29,959
REFERENCE/DOCKET NUMBER: 24615-20026.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-327-7250
TELEFAX: 415-327-2951
INFORMATION FOR SEQ ID NO: 32:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-233-510-32
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Query Match 74.9% Score 1848; DB 4; Length 467;
Best Local Similarity 74.3%; Pred. No. 2.4e-182;
Matches 347; Conservative 42; Mismatches 78; Indels 0; Gaps 0;
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```
QY 1 MGVEVLLSLATLFGSTGALGPGNSHSCDVTGQYOCPELSHLMGYSPFSLADE 60
D 1 MGSAVALLPLLYLLSGVSLGAVPASRNQSCDVTGQYOCPELSHLMGYSPFSLANE 60
QY 61 SAISPDYKGCGRYFVQVLSRHGARYPTSSASKAYSALIEAIOKNATAFKGYAFLKTYN 120
D 61 SVISPEVPACGRYFAQVLSRHGARYPTDSKGRKYSALIEIOQNATTFDGKXAFLEKTYN 120
QY 121 YTLGADLTLPFGEOOMVNSGIRKRYKALARKIVPFRASGSDRYASAEKITEGQSA 180
D 121 YSLGADLTLPFGEOELVNSGIRKRYKALARKIVPFRASGSDRYASAEKITEGQSA 180
QY 181 KLADPGANPHQASPVINVIIPGAGYNNLTHGLCTAFEESELGDVEANFTAVFAPPIR 240
D 181 KLADPGANPHQASPVINVIIPGAGYNNLTHGLCTAFEESELGDVEANFTAVFAPPIR 240
QY 241 ARLEAHLPGVNLDEDEVNLMKCPEDTYARTSDATQLSPFCDLFTHDEMIQYDYLSLG 300
D 241 QRLNDLSGVTLLDTEVYLLMDKCSFDITISTVDTKLSPFCDLFTHDEMINVDYLSLK 300
QY 301 KYYGAGANPLGPAQGVGFVNELIARLTHSPVODHTSTNHHTLDSNPATPPLNATLYADS 360
D 301 KYYGAGANPLGPAQGVGFVNELIARLTHSPVODHTSTNHHTLDSNPATPPLNATLYADS 360
QY 361 HDNTMVSIFPALGLYNGTKPLSTTSVESIETDGYASWTVPFAARAYEVMQCEAKEP 420
D 361 HDNTMVSIFPALGLYNGTKPLSTTSVESIETDGYASWTVPFAARAYEVMQCEAKEP 420
QY 421 LVRLVNDRVVPLHGGCVNKLGRCKRDPFVEGLSPFARSGNMEECPA 467
D 421 LVRLVNDRVVPLHGGCVNKLGRCKRDPFVEGLSPFARSGNMEECPA 467
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Db 421 LVRVLYNDRVPLHGCPCVDALGRCTRDSEVVRGLSFARSGGDMACFA 467

RESULT 15

US-09-155-855-3  
 ; Sequence 3, Application US/09155855  
 ; Patent No. 6139902  
 ; GENERAL INFORMATION:  
 ; APPLICANT: KONDO, Hidemasa  
 ; APPLICANT: ANAZAWA, Hideharu  
 ; APPLICANT: KANEKO, Syunichi  
 ; APPLICANT: NAGASHIMA, Tadashi  
 ; APPLICANT: TANGE, Tatsuya  
 ; TITLE OF INVENTION: NOVEL PHYTASE AND GENE ENCODING SAID PHYTASE  
 ; FILE REFERENCE: 81356/124  
 ; CURRENT APPLICATION NUMBER: US/09/155,855  
 ; CURRENT FILING DATE: 1998-10-05  
 ; EARLIER APPLICATION NUMBER: WO PCT/JP97/01175  
 ; EARLIER FILING DATE: 1997-04-04  
 ; EARLIER APPLICATION NUMBER: JP 084314  
 ; NUMBER OF SEQ ID NOS: 7  
 ; SOFTWARE: Patent Ver. 2.0  
 ; SEQ ID NO 3  
 ; LENGTH: 467  
 ; TYPE: PRT  
 ; ORGANISM: Aspergillus niger  
 US-09-155-855-3

Query Match 74.6%; Score 1841; DB 4; Length 467;

Best Local Similarity 73.2%; Pred. No. 1.3e-181;  
 Matches 342; Conservative 49; Mismatches 76; Indels 0; Gaps 0;

QY 1 MGVEVLLSIATLEFSGTALGPRGNSHSCDTVDGGYQCPPEISHLMGYSPPFSLADE 60  
 DB 1 MGVSAVLLPLVILSGVTSGLAVPASRNSQCTDVTDOGYCSETSIHLMGQYAPFSLANK 60  
 QY 61 SAISPDVPRGCHVTFVQVLSRHGARYPTSSASKAYSALIEAIQKNATAFKGYAFKLTYN 120  
 DB 61 SAISPDVPRGCHVTFVQVLSRHGARYPTSSASKAYSALIEAIQKNATAFKGYAFKLTYN 120  
 QY 121 YSLGADDLTPGEQOMVNSGTFEYRRYKALARKIYPTFRAGSDRVITASAEKFTIEGFOSA 180  
 DB 121 YSLGADDLTPGEQOMVNSGTFEYRRYKALARKIYPTFRAGSDRVITASAEKFTIEGFOSA 180  
 QY 181 K1ADPGANPHQASPVINYIIEGAGYNNTLDHGLCTAFEESELDDVYANFTAVFAPPIR 240  
 DB 181 K1ADPGANPHQASPVINYIIEGAGYNNTLDHGLCTAFEESELDDVYANFTAVFAPPIR 240  
 QY 241 ARLEAHLGCVNITDEEDVYNLMDMCPFDVARTSDATOLSPFCDLFTHEWTOYDIQSLG 300  
 DB 241 ARLEAHLGCVNITDEEDVYNLMDMCPFDVARTSDATOLSPFCDLFTHEWTOYDIQSLG 300  
 QY 301 KYGGAGNPLPGPAQGVFNELIARLTHSPYODHTSTNHTLDSNPATPLNATLYADFS 360  
 DB 301 KYGGAGNPLPGPAQGVFNELIARLTHSPYODHTSTNHTLDSNPATPLNATLYADFS 360  
 QY 361 HDNTWVSIFALGLYNGTRPLSTSVESIEETDGYASMTVPFAARAYVEMOCEAEKEP 420  
 DB 361 HDNTWVSIFALGLYNGTRPLSTSVESIEETDGYASMTVPFAARAYVEMOCEAEKEP 420  
 QY 421 LVRVLYNDRVPLHGCPCVDALGRCTRDSEVVRGLSFARSGGDMACFA 467  
 DB 421 LVRVLYNDRVPLHGCPCVDALGRCTRDSEVVRGLSFARSGGDMACFA 467

Search completed: July 3, 2002, 09:33:16  
 Job time: 155 sec